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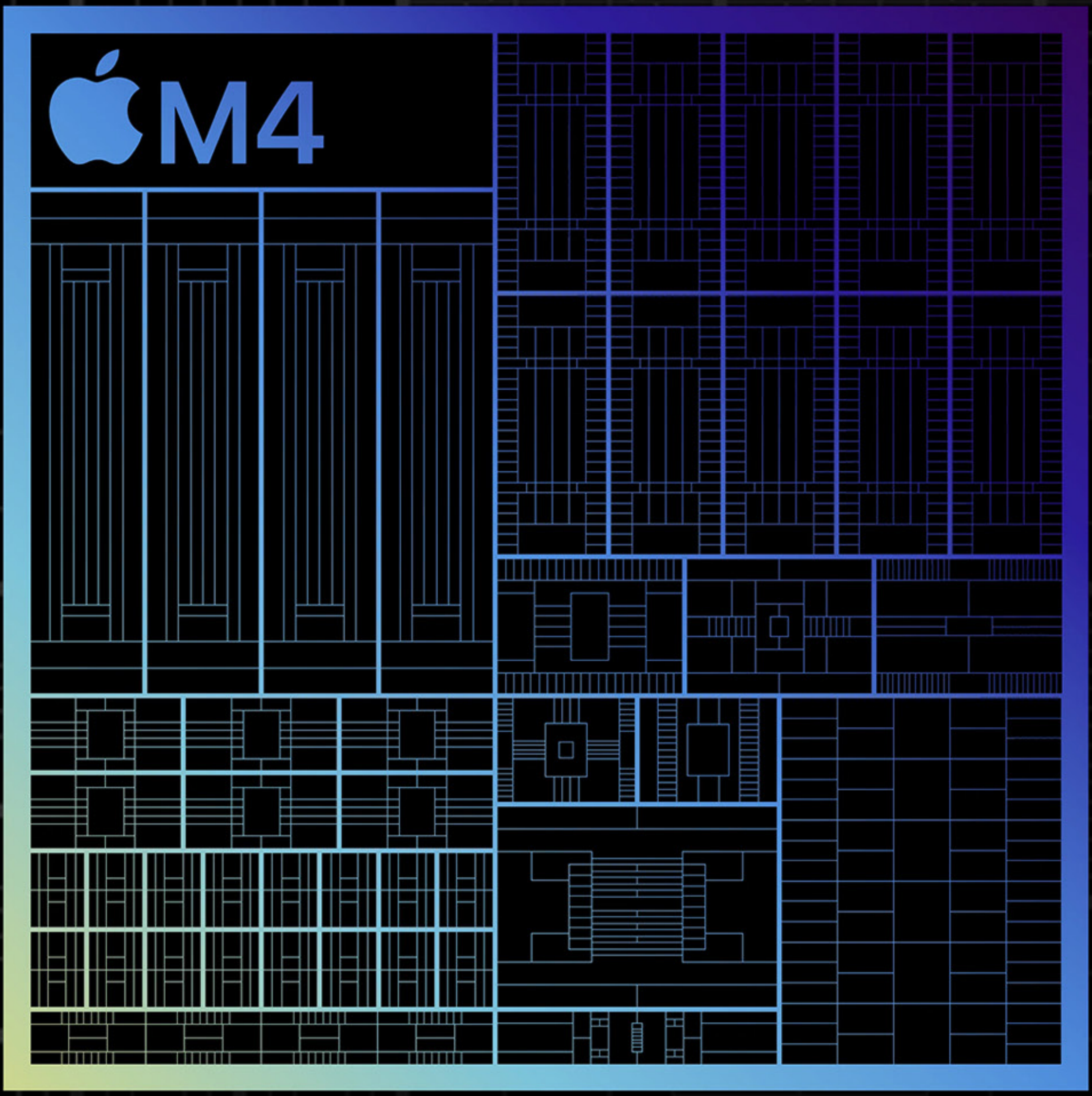
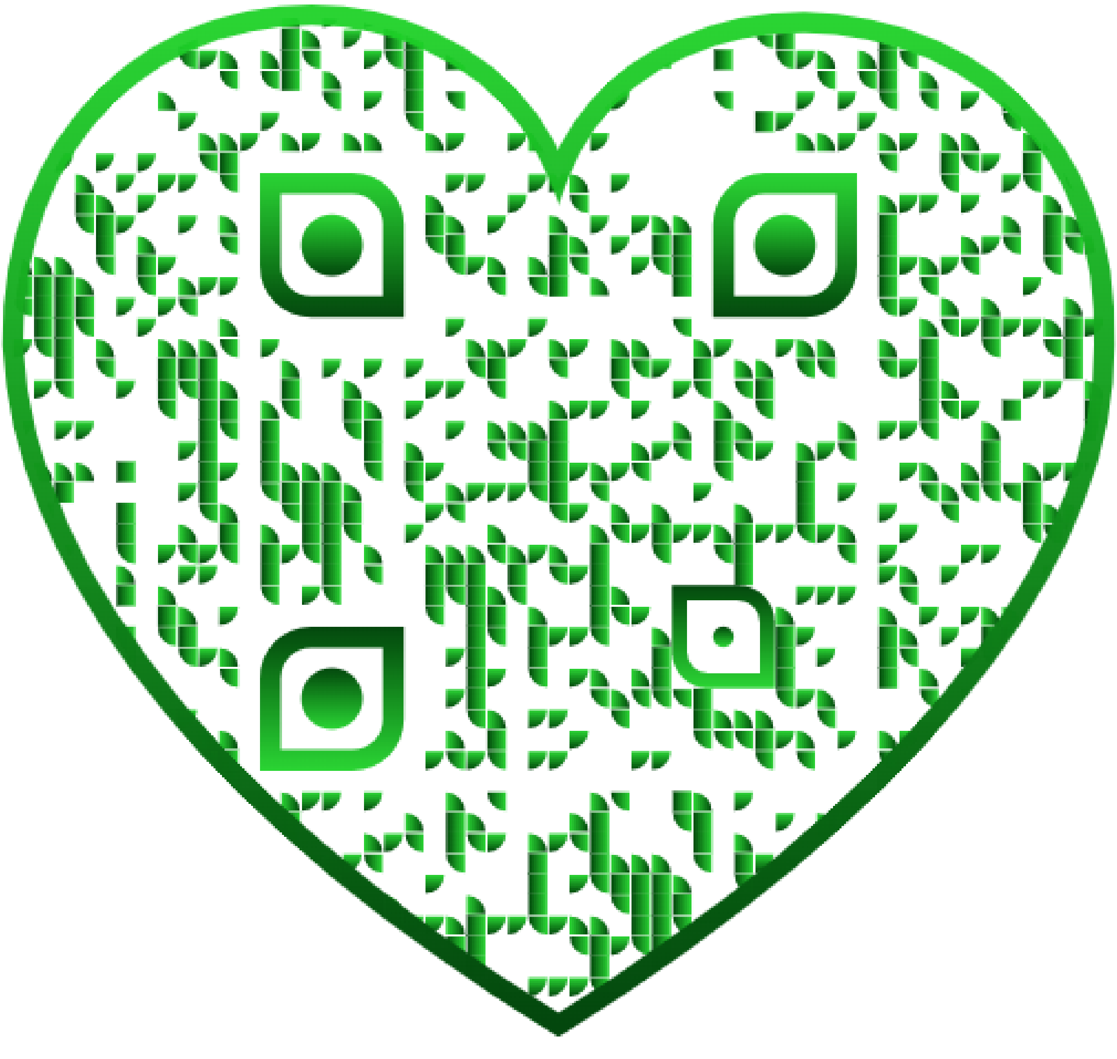
PUTTING THE POWER OF AI TOOLS TO WORK FOR YOU



# Macs Unified

THE M4 CHIP LINEUP WE'VE BEEN EXPECTING FOR OVER A DECADE



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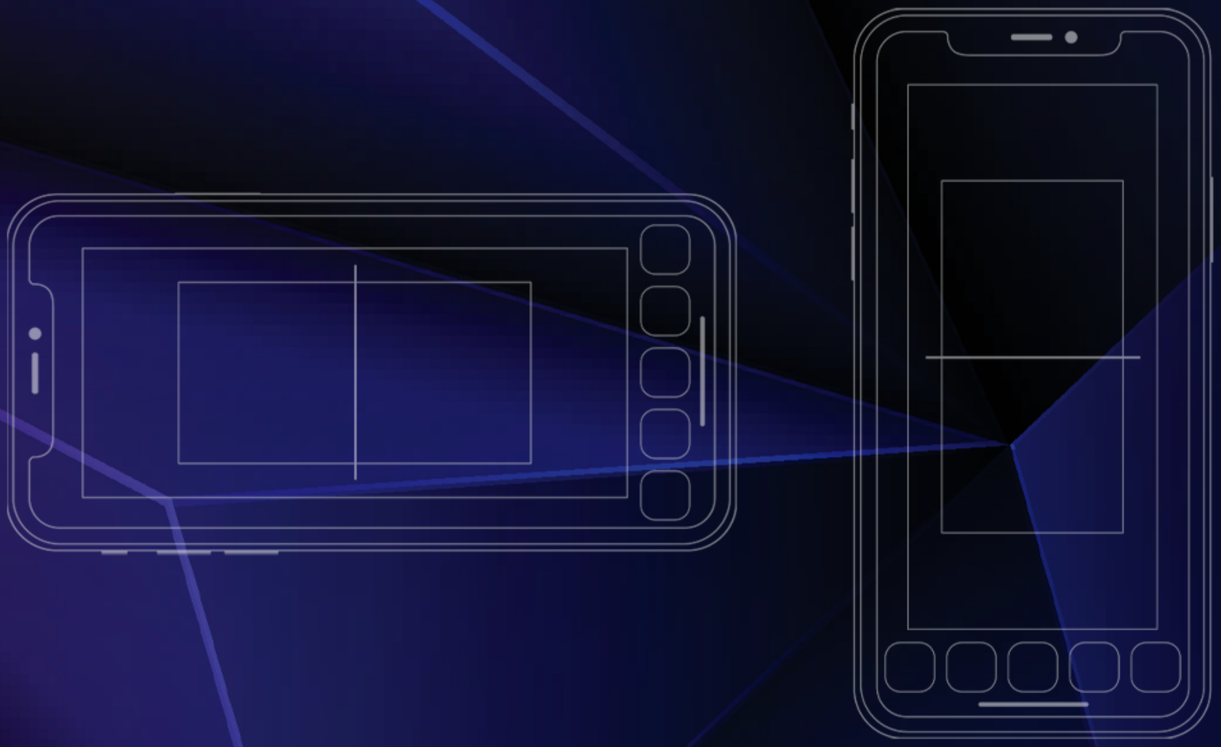

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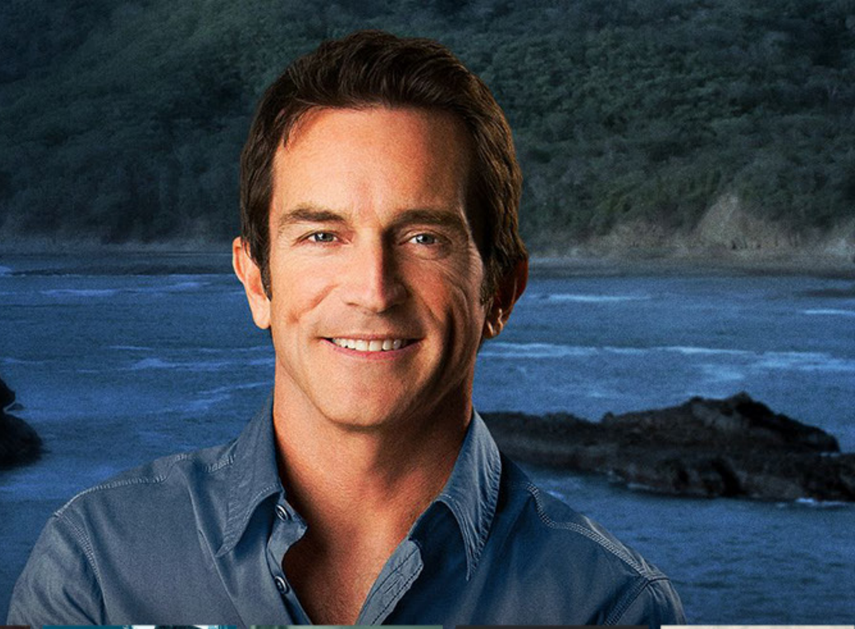

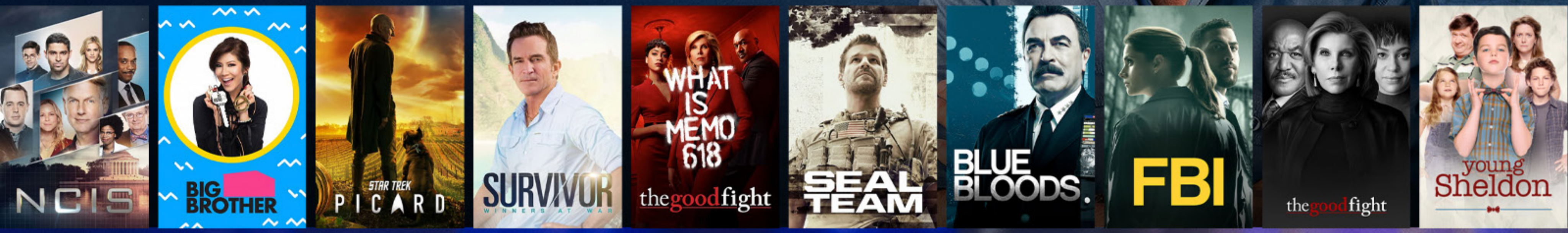
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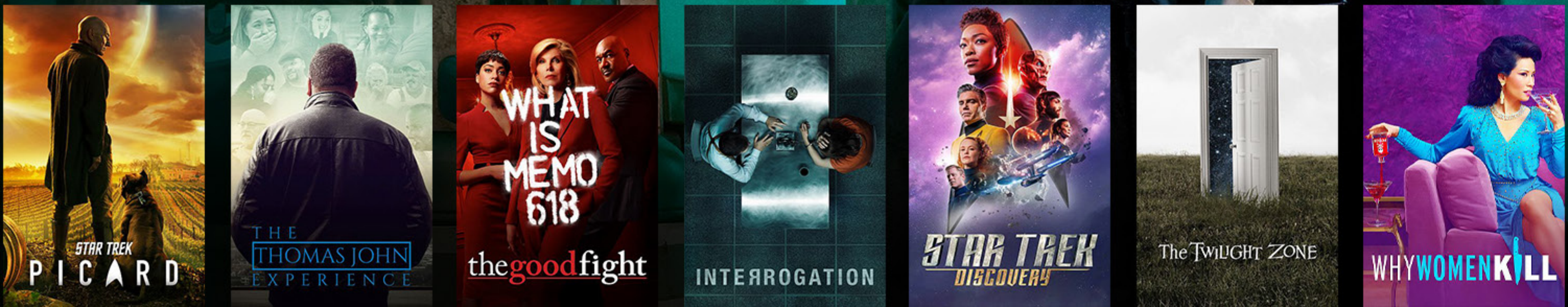
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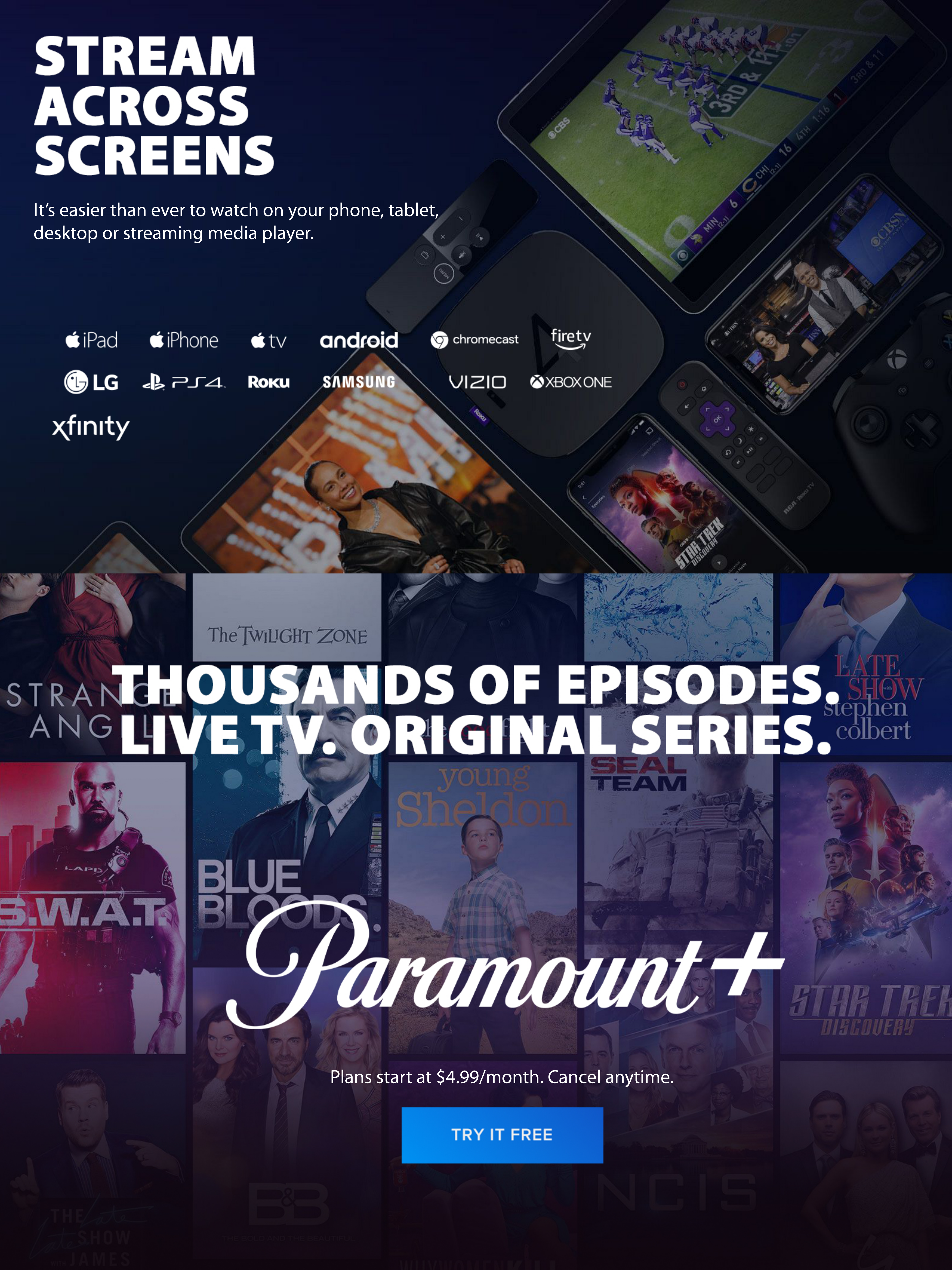

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# FLYING TAXIS ARE ON THE HORIZON AS AVIATION SOARS INTO A NEW FRONTIER

When he was still a boy making long, tedious trips between his school and his woodsy home in the mountains during the 1980s, JoeBen Bevirt began fantasizing about flying cars that could whisk him to his destination in a matter of minutes.

As CEO of Joby Aviation, Bevirt is getting closer to turning his boyhood flights of fancy into a dream come true as he and latter-day versions of the Wright Brothers launch a new class of electric-powered aircraft vying to become taxis in the sky.

The aircraft — known as "electric vertical take-off and landing vehicle, or eVTOL — lift off the ground like a helicopter before flying at speeds

up to 200 miles per hour (322 kilometers per hour) with a range of about 100 miles (161 kilometers). And these craft do it without filling the air with excessive noise caused by fuel-powered helicopters and small airplanes.

“We are just a few steps from the finish line. We want to turn what are now one- and two-hour trips into five-minute trips,” Bevirt, 51, told The Associated Press before a Joby air taxi took off on a test flight in Marina, California — located about 40 miles south from where he grew up in the mountains.

Archer Aviation, a Silicon Valley a Silicon Valley company backed by automaker Stellantis and United Airlines, has been testing its own eTVOLs over farmland in Salinas, California, where a prototype called “Midnight” could be seen gliding above a tractor plowing fields last November.

The tests are part of the journey that Joby Aviation and other ambitious companies that collectively have raised billions of dollars are taking to turn flying cars into more than just pie-in-the-sky concepts popularized in 1960s-era cartoon series, “The Jetsons,” and the 1982 science fiction film, “Blade Runner.”

Archer Aviation and nearby Wisk Aero, with ties to aerospace giant Boeing Co. and Google co-founder Larry Page, are also at the forefront in the race to bring air taxis to market in the United States. Joby has already former a partnership to connect its air taxis with Delta Air Lines flights while Archer Aviation has a similar alliance with United Airlines.

Flying taxis have made enough regulatory inroads with the U.S. Federal Aviation

Jo
EXPERIMENTAL

by

Administration to result in the recent creation of a new aircraft category called "powered lift," a step that the agency hadn't taken since helicopters were introduced for civilian use in the 1940s.

But there are more regulatory hurdles to be cleared before air taxis will be allowed to carry passengers in the U.S., making Dubai the most likely place where eVTOLs will take commercial flight — perhaps by the end of this year.

"It's a tricky business to develop a whole new class of vehicles," said Adam Lim, director of Alton Aviation Consultancy, a firm tracking the industry's evolution. "It is going to be like a crawl, walk, run situation. Right now, I think we are still crawling. We are not going to have the Jetsons-type reality where everyone will be flying around everywhere in the next two to three years."

China is also vying to make flying cars a reality, a quest that has piqued President-elect Donald Trump's interest in making the vehicles a priority for his incoming administration during the next four years.

If the ambitions of eVTOL pioneers are realized in the U.S., people will be able to hop in an air taxi to get to and from airports serving New York and Los Angeles within the next few years.

Because its electric taxis can fly unimpeded at high speeds, Joby envisions transporting up to four Delta Air Lines passengers at a time from New York area airports to Manhattan in about 10 minutes or less. To start, air taxi prices almost certainly will be significantly more that the cost of taking a cab or Uber ride from JFK airport to

Manhattan, but the difference could narrow over time because eVTOLs should be able to transport a higher volume of passengers than ground vehicles stuck in traffic going each way.

“You will see highways in the sky,” Archer Aviation CEO Adam Goldstein predicted during an interview at the company’s San Jose, California, headquarters. “There will be hundreds, maybe thousands of these aircraft flying in these individual cities and it will truly change the way cities are being built.”

Investors are betting Goldstein is right, helping Archer raise an additional $430 million late last year from a group that included Stellantis and United Airlines. The infusion came shortly after a Japanese automaker poured another $500 million into Joby to bring its total investment in that company to nearly $900 million.

Those investments were part of the $13 billion that eTVOL companies have raised during the past five years, according to Alton Aviation.

Both Joby Aviation and Archer Aviation went public in 2021 through reverse mergers, opening up another fundraising avenue and making it easier to recruit engineers with the allure of stock options. Both companies have been able to attract workers away from electric automaker Tesla and rocket maker SpaceX and, in Archer’s instance, raiding the ranks of Wisk Aero.

The Wisk defections triggered a lawsuit accusing Archer of intellectual property theft in a dispute that was resolved with a 2023 settlement that included an agreement for the two sides to collaborate on some facets of eTVOL technology.

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Before going public, Joby also acquired eTVOL technology developed by ride-sharing service Uber in an $83 million deal that also brought those two companies together as partners.

But none of the deals or technological advances have stopped the losses from piling up at the companies building flying cars. Joby, whose roots date back to 2009 when Bevirt founded the company, has sustained $1.6 billion in losses since its inception while Archer has amassed nearly $1.5 billion in losses since its founding in 2018.

While they moved to commercial air taxi services, both Joby and Archer are trying to bring in revenue by negotiating contracts to use their eTVOLs in the U.S. military for deliveries and other other short-range missions. Archer has forged a partnership with Anduril Industries, a military defense technology specialist founded by Oculus headset inventor Palmer Luckey, to help it win deals.

The uncertain prospects have left both companies with relatively low market values by tech industry standards, with Joby's hovering around $7 billion and Archer's $6 billion.

But Bevirt sees blue skies ahead. "eVTOLs are going to transform the way we move," he said. "It's a dramatically better way to get around. Seeing the world from the air is better than being stuck in the traffic on the interstate."

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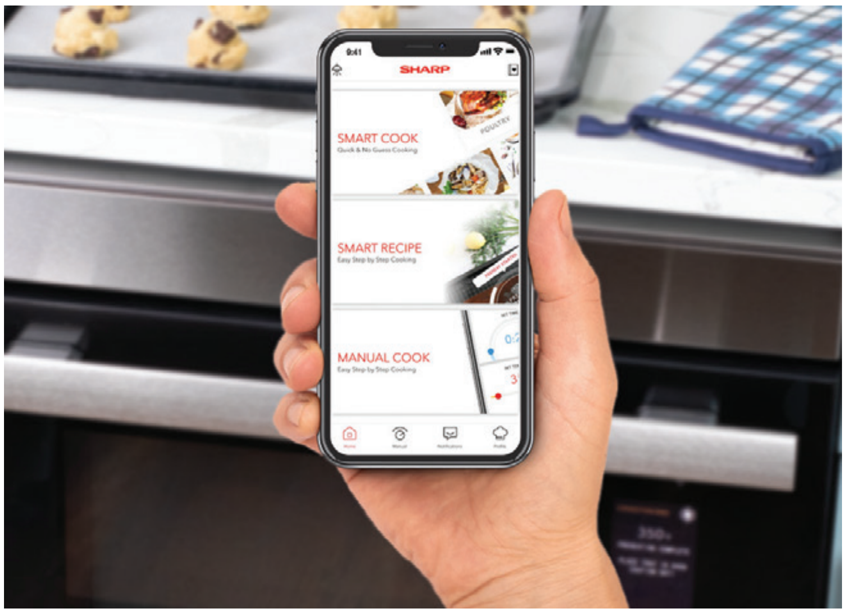

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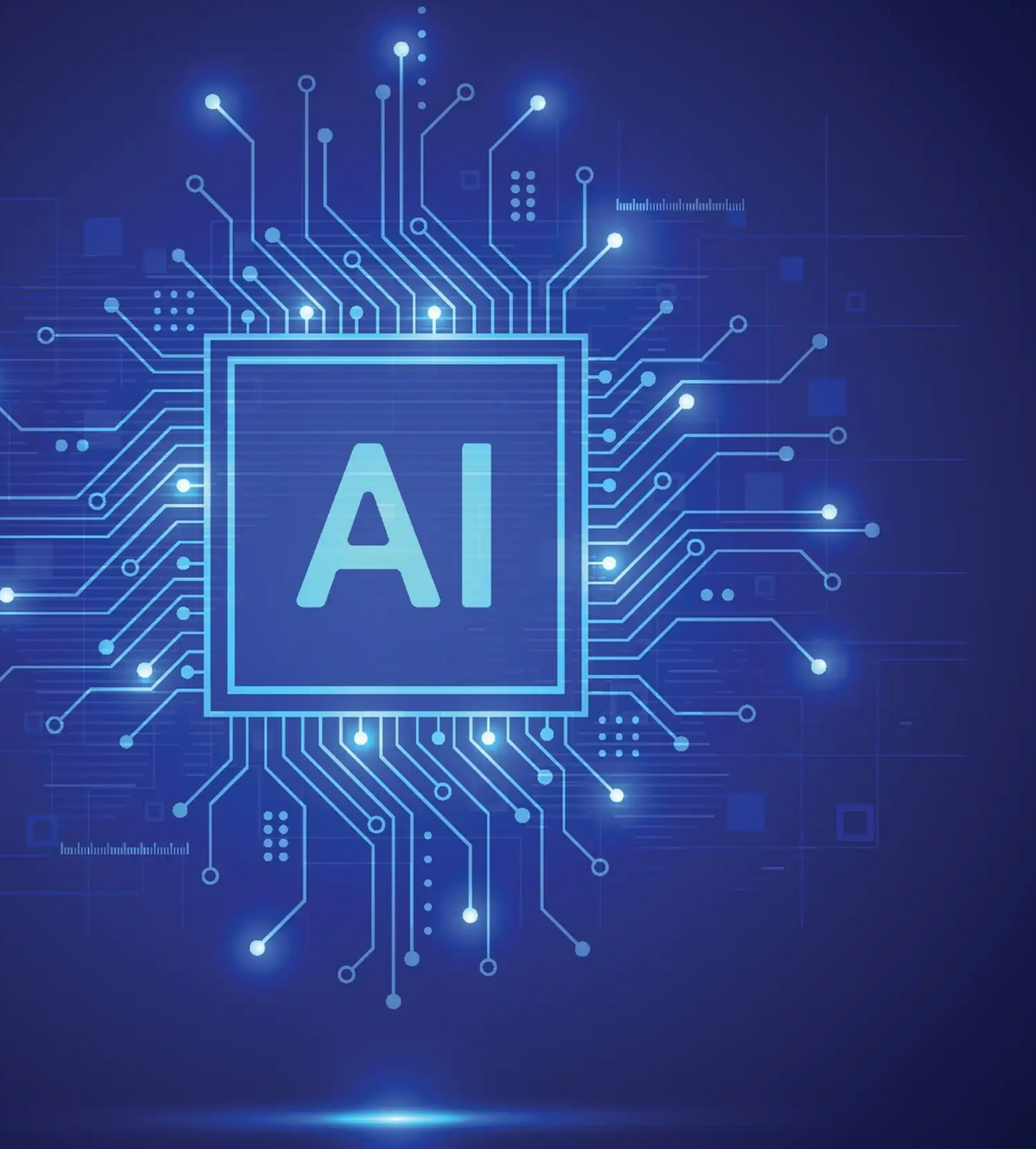
# AI IS BECOMING INGRAINED IN BUSINESSES ACROSS INDUSTRIES. WHERE IS IT GOING IN 2025?


AI

As artificial intelligence continues to grow at a rapid pace, more and more businesses are grappling with how to adapt both quickly and responsibly.

Dan Priest is the new Chief AI Officer at PwC, one of the world's largest consulting firms, where he works with companies across industries as they adopt this burgeoning technology both into their day-to-day operations and future business models. He says 2024 was all about proving what AI brings to the table — and expects 2025 will shift more into scaling it.

Priest recently spoke with The Associated Press about his new role and other AI business predictions his team has for the year ahead. The interview has been edited for length and clarity.

## WHEN DID PWC DECIDE IT WANTED A CHIEF AI OFFICER?

We launched the role in early July, on the heels of us doing an AI impact analysis and strategy for the firm. The motivation was simply to make sure we were tapping into AI's full potential, responsibly, to best serve our clients. We work with companies across a range of sectors — including tech, health care and hospitality.

## WHAT HAVE THE COMPANIES YOU WORK WITH TOLD YOU ABOUT HOW THEY'RE ADOPTING AI?

AI is showing up in some form or fashion for the majority of our clients these days. In a recent survey that we did of Fortune 1000 companies, nearly half of respondents said AI is fully embedded in their workflows — and then about

pwc

a third had even embedded it in their products and services.

And AI is more than just a tech initiative, it's also adjusting business strategies. CEOs overwhelmingly recognize that AI will impact their business model in some way — with about 73% of those we spoke to in a predictions report saying that they believe AI would cause a shift in their business model. In particular, we're increasingly seeing generative AI both in the presence of the consumer and throughout product development.

## CAN YOU GIVE ME EXAMPLES OF WHAT THAT LOOKS LIKE?

To be competitive, companies can't just predict what consumers want anymore. You have to give them a way to personalize the specific products and services they want — and gen AI has a means of doing that.

Take a business in the cruising sector, for example. In the past, cruise lines would have to predict what each type of foods, products and excursions people wanted. Now, with gen AI, they can have a personalization engine that says, "I'm a fan of these luxury products," and then make sure those types of luxury products are on board. Or, "I'm a fan of this type of food," and they can make sure that food is on the menu. It gives companies a way to personalize the experience that wasn't possible before.

## WHAT RISKS SHOULD COMPANIES KEEP IN MIND WHEN APPROACHING AI?

AI is not monolithic, and there are different maturity levels for different uses. You've seen

Ai

pwc
Welcome Lounge - Leve

issues in contact centers, for example, where AI agents were introduced and in some cases gave customers hallucinations with wrong information. And so having a “maturity test” to make sure they tech you’re using is ready for prime time, particularly when it’s customer-facing, is important. Those same disciplines are critical for protecting internal data, which you don’t want inadvertently training a large language model.

That’s one category of risk. On the other side of all of this, another risk is not moving quickly enough and falling behind. Your AI strategy will either put you ahead or make it hard to ever catch up. If we take a lesson from the Internet era, a lot of those early movers ended up being winners for the next ten, 20 years. We expect to see something very similar for companies that embrace AI today, both early on and in a trustworthy way.

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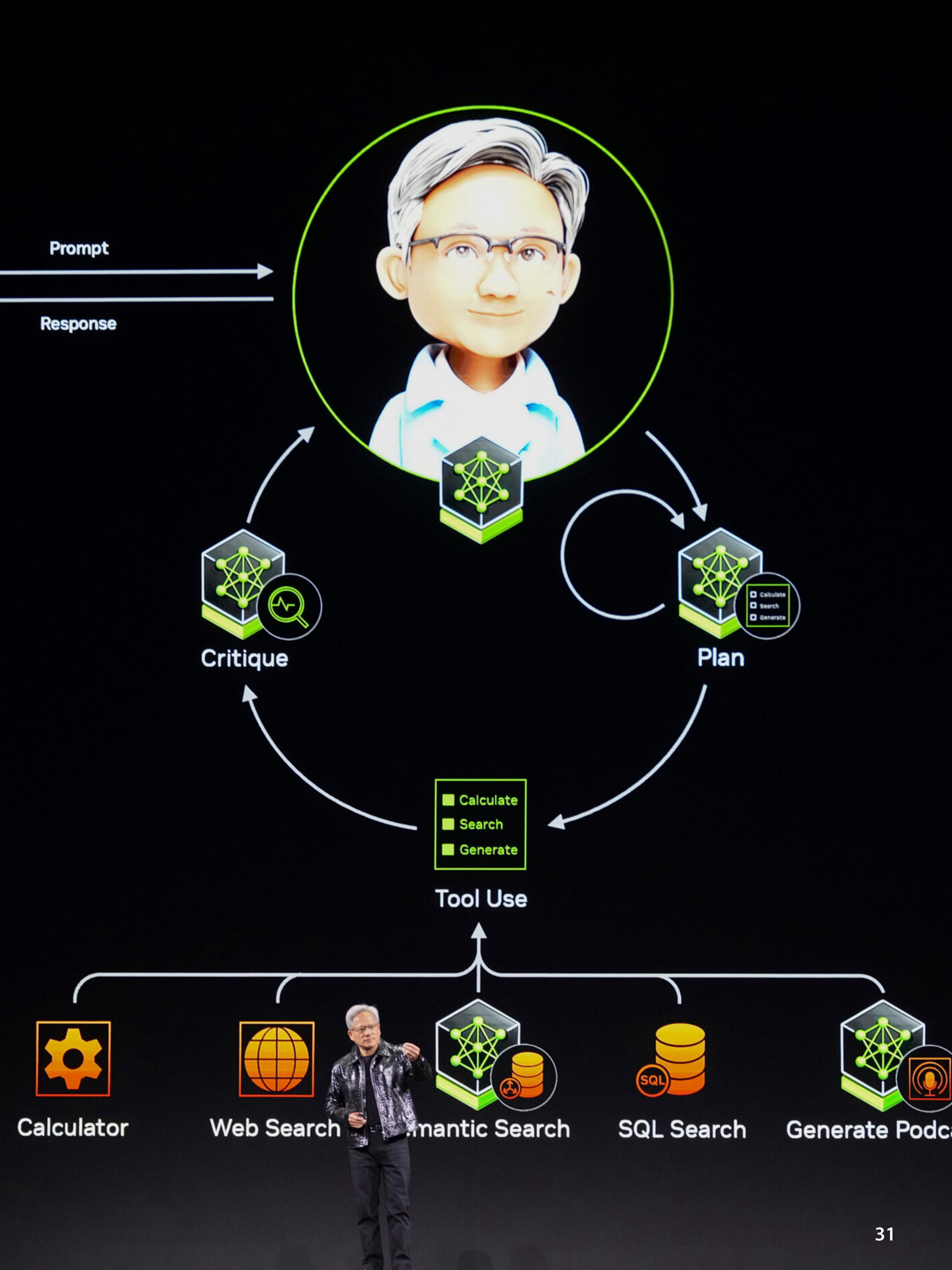
# BIGGEST NVIDIA TAKEAWAYS FROM JENSEN HUANG'S CES 2025 KEYNOTE

User or Machine

Nvidia CEO Jensen Huang unveiled a suite of new products, services and partnerships at CES 2025.

In a packed Las Vegas arena, Huang kicked off the CES this week with his vision for how his companies' products will drive gaming, robotics, personal computing and even self-driving vehicles forward.

Here's a look at the biggest announcements to come out of his appearance.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## NEW GRAPHICS CARDS AND AI CHIPS

Going back to its roots in gaming, the chipmaker and AI darling unveiled its GeForce RTX 50 Series desktop and laptop GPUs — its consumer graphics processor units for gamers, creators and developers.

Huang said the GPUs, which use the company's next-generation artificial intelligence chip Blackwell, can deliver breakthroughs in AI-driven rendering.

"Blackwell, the engine of AI, has arrived for PC gamers, developers and creatives," Huang said, adding that Blackwell "is the most significant computer graphics innovation since we introduced programmable shading 25 years ago." Blackwell technology is now in full production, he said.

The flagship RTX 5090 model will be available in January for $1,999. The RTX 5070 will launch later in February for $549

## AI MODELS TO HELP WITH ROBOTICS AND VEHICLES

Huang also introduced a series of new AI models — dubbed Cosmos — that can generate cost-efficient photo-realistic video that can then be used to train robots and other automated services.

The open-source model, which works with the Nvidia's Omniverse — a physics simulation tool — to create more realistic video, promises to be much cheaper than traditional forms of gathering training, such as having cars record road experiences or having people teach robots repetitive tasks.

VIDIA

Central to this is Nvidia's new partnership with Japanese automaker Toyota to build its next-generation autonomous vehicles, and its announced partnership with Aurora to power its autonomous shipping trucks.

Nvidia's DriveOS operating system would power the new cars, which Huang said has the highest standard of safety. "I predict that this will likely be the first multi-trillion dollar robotics industry."

Aurora, based in Pittsburgh, plans to launch its driverless trucks — with Nvidia's hardware — commercially in April 2025.

## AND A SUPERCOMPUTER ON YOUR DESK

And finally, **Huang announced Project DIGITS,** a $3,000 desktop computer targeted at developers or gen AI enthusiasts who want to experiment with AI models at home.

The machine will launch in May and is powered by the new Blackwell chip. In all, Project DIGITS will allow users to run AI models with up to 200 billion parameters. This means models previously requiring expensive cloud infrastructure to operate can run on your desktop.

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RTX 5090

# NVIDIA'S NEW GPU SERIES LED AN AVALANCHE OF ENTERTAINMENT-RELATED ANNOUNCEMENTS AT CES

In a packed Las Vegas arena, Nvidia founder Jensen Huang stood on stage and marveled over the crisp real-time computer graphics displayed on the screen behind him. He watched as a dark-haired woman walked through ornate gilded double doors and took in the rays of light that poured in through stained glass windows.

"The amount of geometry that you saw was absolutely insane," Huang told an audience of thousands at CES 2025 Monday night. "It would have been impossible without artificial intelligence."

The chipmaker and AI darling unveiled its GeForce RTX 50 Series desktop and laptop GPUs — powered by its new Blackwell artificial intelligence chip — kicking off a string of entertainment-related AI announcements and discussions at the trade show.

"Blackwell, the engine of AI, has arrived for PC gamers, developers and creatives," Huang said, adding that Blackwell "is the most significant computer graphics innovation since we introduced programmable shading 25 years ago." Blackwell technology is now in full production, he said.

Semiconductor maker AMD unveiled its latest Ryzen 9 and AI series processors Monday morning, boasting unprecedented performance for gamers and content creators. The new chips help AMD to further compete with rivals like Nvidia, Intel and Qualcomm in the budding AI PC space.

"With the next generation of AI-enabled processors, we are proliferating AI to devices

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everywhere, and bringing the power of a workstation to thin and light laptops," said Jack Huynh, senior vice president and general manager of computing and graphics group at AMD.

Google, meanwhile, previewed new AI tools for Google TV that use Gemini to make "interacting with your TV more intuitive and helpful." Users, the company said, will be able to have a "natural" conversation with their TVs to ask about things like travel and history, or ask the TV for an overview of the day's news.

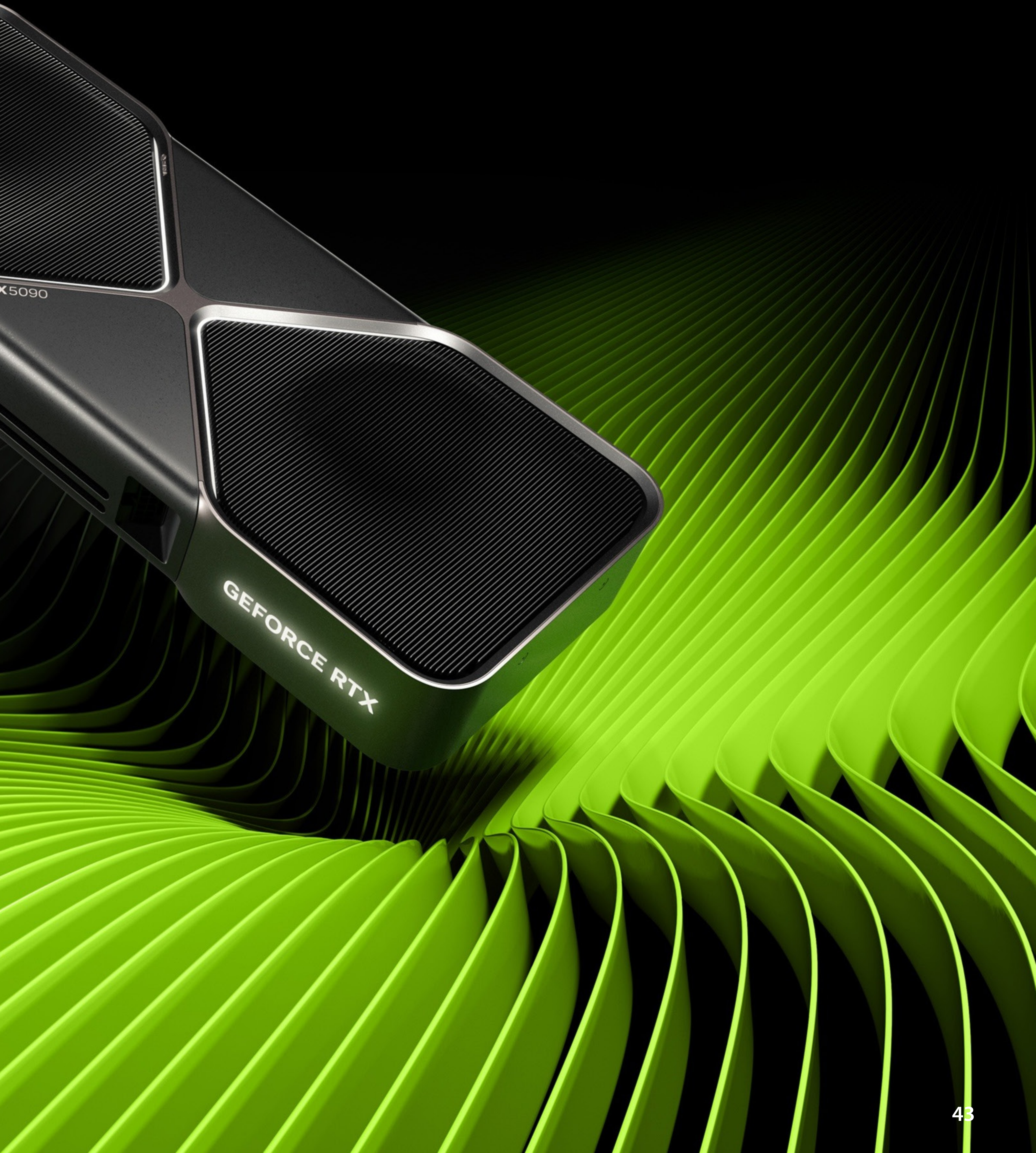
Samsung also showed off its foray in AI and announced its "Samsung Vision AI" that includes a click to search feature allowing users to do things like identify an actor on screen, and a translation feature that provides real-time subtitles. It also integrates with the rest of the company's smart home ecosystem.

SW Yong, president and head of visual display business at Samsung Electronics, said the company sees TVs as "interactive, intelligent partners" rather than "one-directional devices for passive consumption."

"We're reimagining what screens can do, connecting entertainment, personalization and lifestyle solutions into one seamless experience to simplify your life," he said.

But not all of the AI discussion revolved around gadgetry at CES.

Leaders in technology and entertainment discussed current trends in generative AI ahead of Tuesday's conference opener. In one panel discussion on entertainment copyright and AI, some attorneys and experts gave their opinions on whether whether the federal government


X5090
GEFORCE RTX

would pass regulations on the technology this year, especially around the issue of gen-AI created deep fakes.

Some believe the courts and individual states would tackle the issue before the government would.

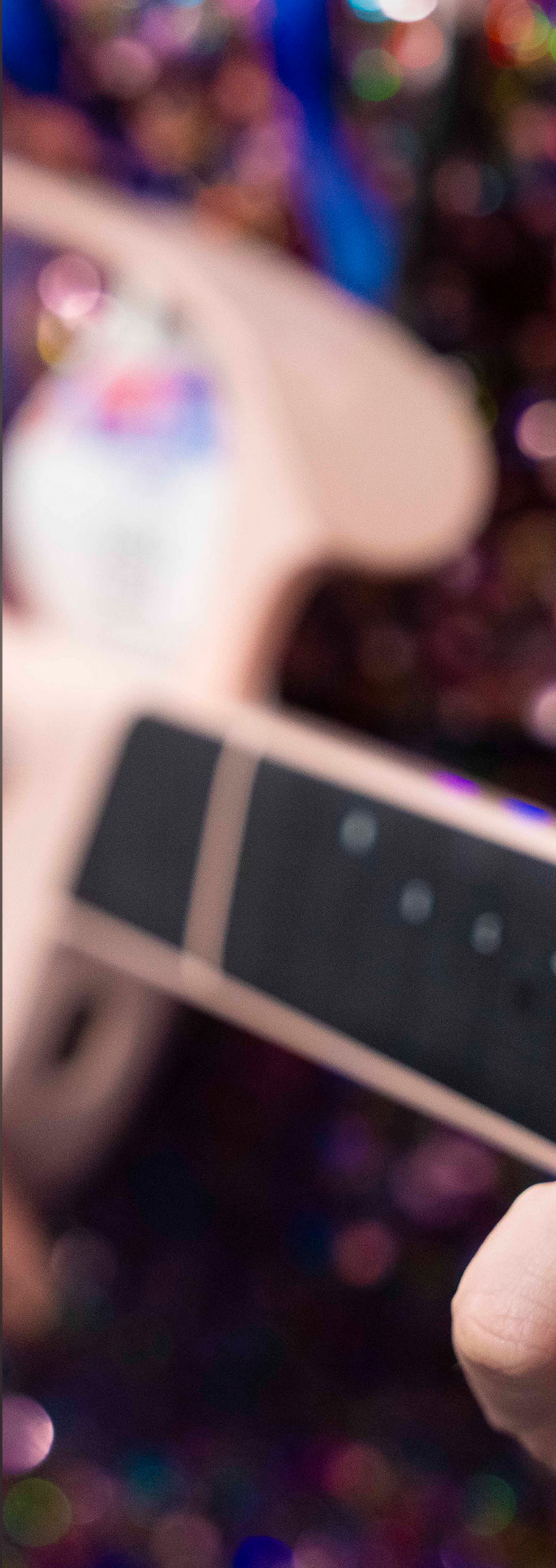
“There have been no major decisions on this issue. They will be litigated and tried in the next year or so,” said Chad Hummel, an attorney at McKool Smith.

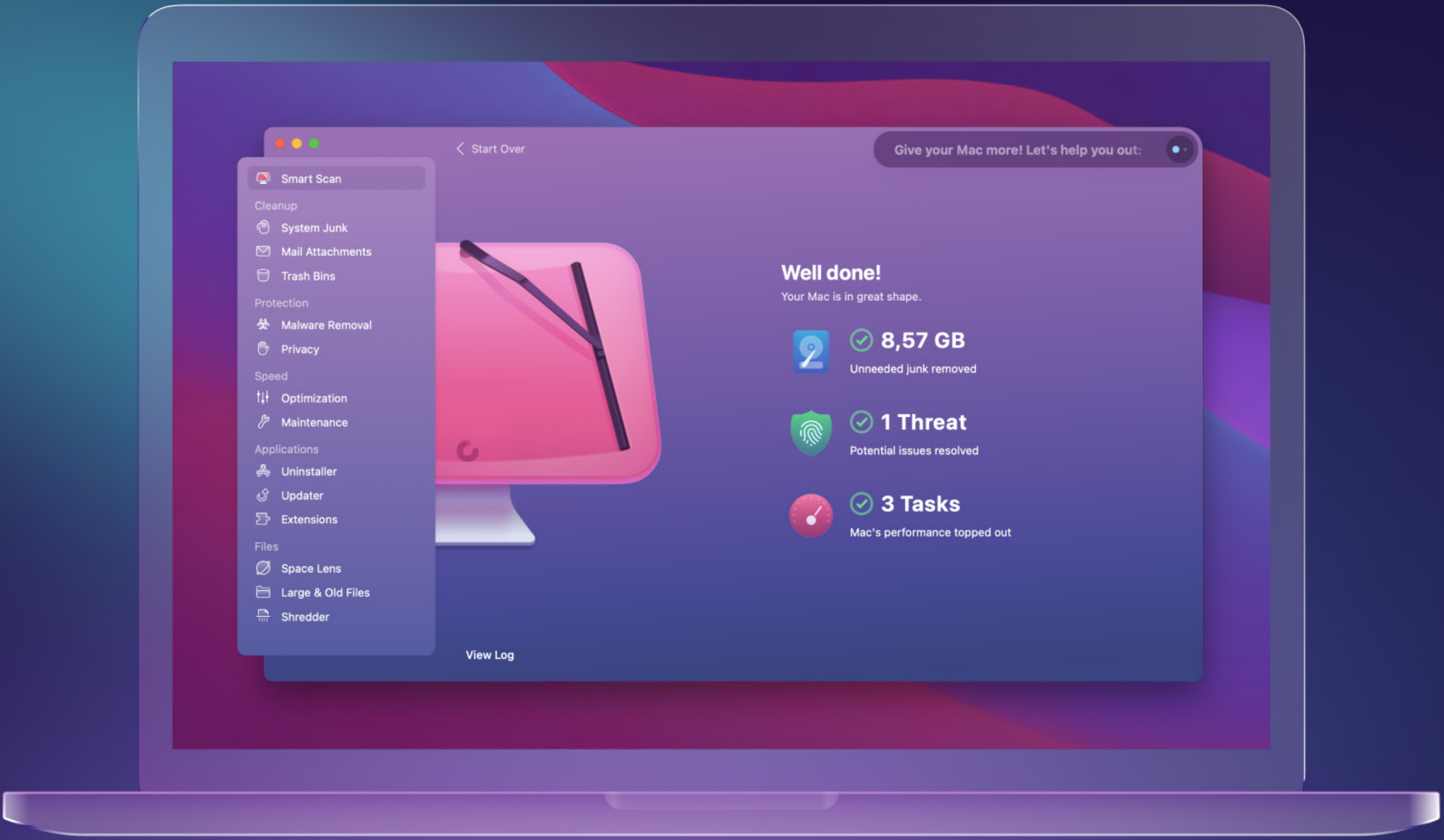
Lisa Oratz, an attorney at Perkins Coie who represents clients in the publishing, arts and entertainment industries, acknowledged that AI technology should be regulated but noted it has an “upside.” She said many of her tech clients’ jobs are being made easier because AI helps alleviate iterative work.

“You can make content creation faster, easier and more affordable. You can do things like reduce barriers to entry and democratize content,” she said.

However, Screen Actors Guild-American Federation of Television and Radio Artists executive director Duncan Crabtree-Ireland said that digital replication was central to their 2023 film and television strike, and that a lack of protections around the unregulated use of AI is core to negotiations between their video game performers and the industry.

“It is a tool and it is also an existential threat,” he said.

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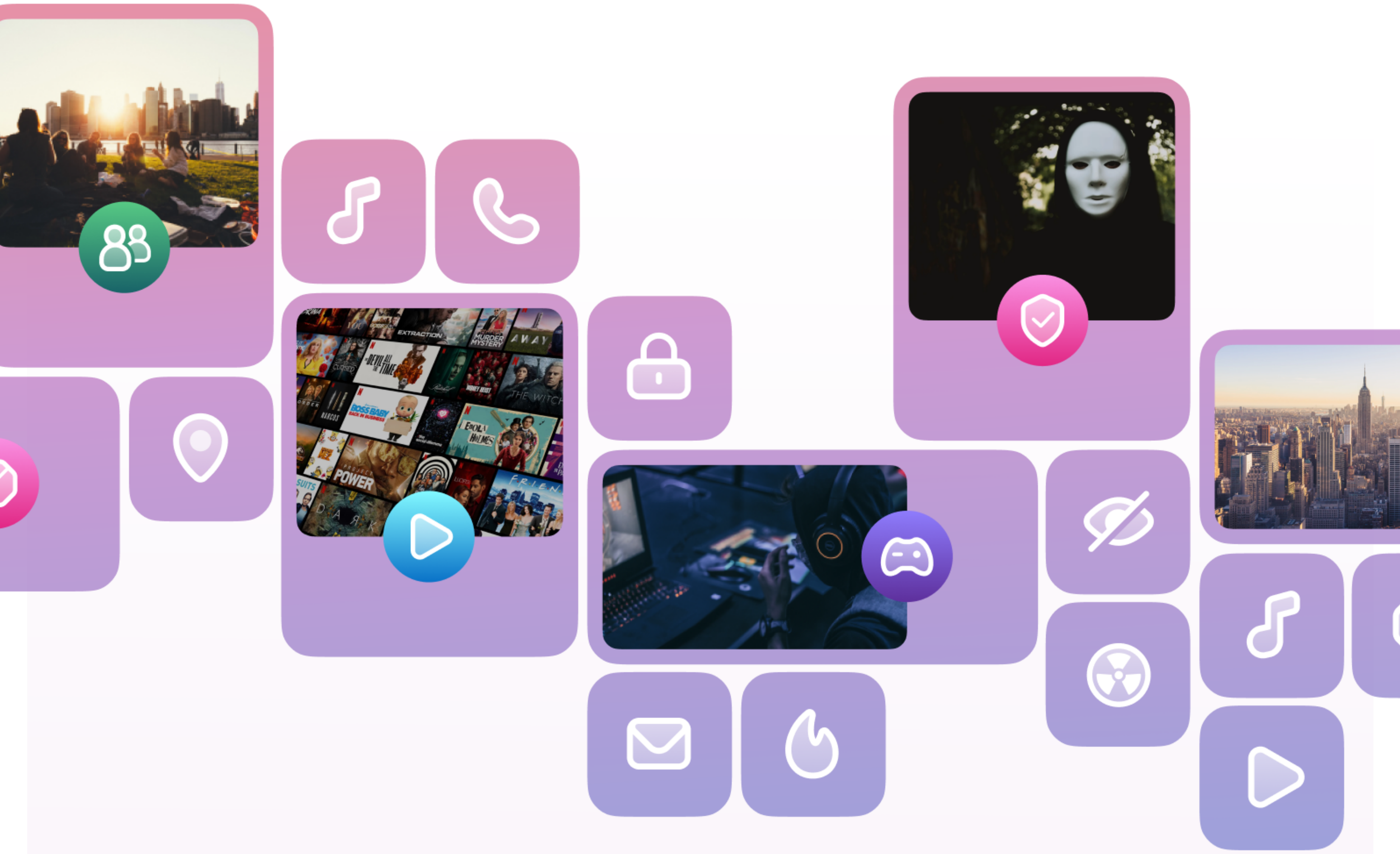

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M4

# Macs Unified

## THE M4 CHIP LINEUP WE’VE BEEN EXPECTING FOR OVER A DECADE

Consistency and innovation are two pillars that often define a brand's longevity and relevance. Apple's Mac lineup has been a testament to both for over a decade, albeit with a noticeable shift under Tim Cook's leadership. As we enter 2025, Apple will finally achieve a remarkable feat: uniformity across its Mac range by introducing the M4 series chips.

## A DECADE OF DIVERSITY

Under the visionary leadership of Steve Jobs, Apple was synonymous with a cohesive design philosophy and a tightly integrated hardware-software ecosystem. However, post-Jobs, especially under Tim Cook, the company diversified its processor lineup to cater to a broader spectrum of users and applications. For over ten years, this strategy meant that different Mac models boasted distinct processors, leading to a fragmented yet versatile ecosystem. While this approach catered to varied performance needs, from the lightweight MacBook Air to

the powerhouse Mac Pro, it also introduced complexities in software optimization and user experience consistency.

The **release of the M1 chip in 2020** marked the beginning of Apple's foray into proprietary silicon, heralding significant performance and efficiency gains. The subsequent iterations, including the M2 and M3 series, further solidified Apple's reputation for innovation. However, unlike the uniformity seen during Jobs' tenure, each Mac model often sported a different chip variant tailored to its specific use case. While beneficial in many aspects, this

M4
PR

M4
RO
M4
MAX

## 10-core CPU

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**4 performance cores**

Improved branch prediction

10-wide instruction decode

40% larger reorder buffer

Next-generation ML accelerators

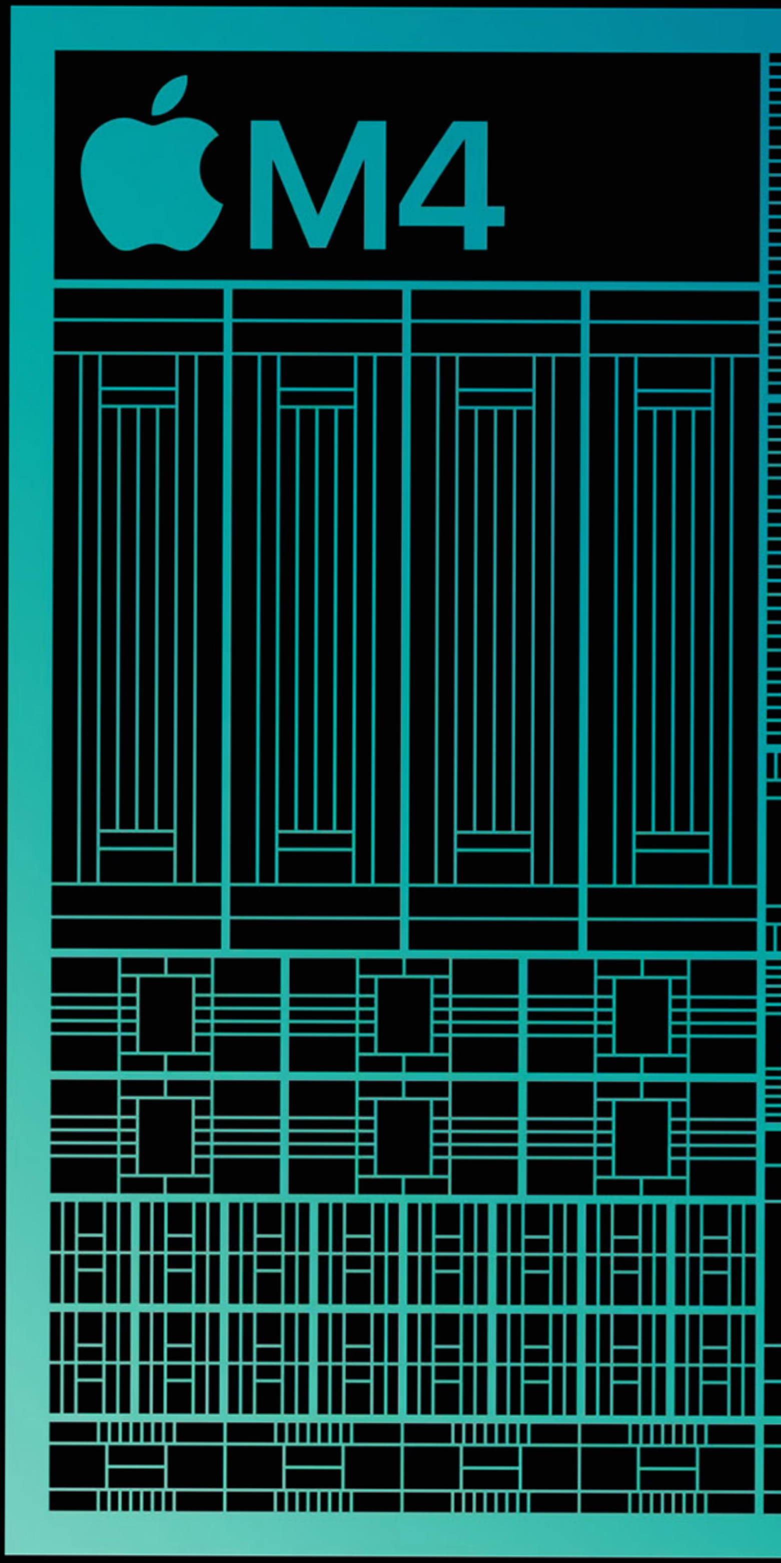
**6 efficiency cores**

Improved branch prediction

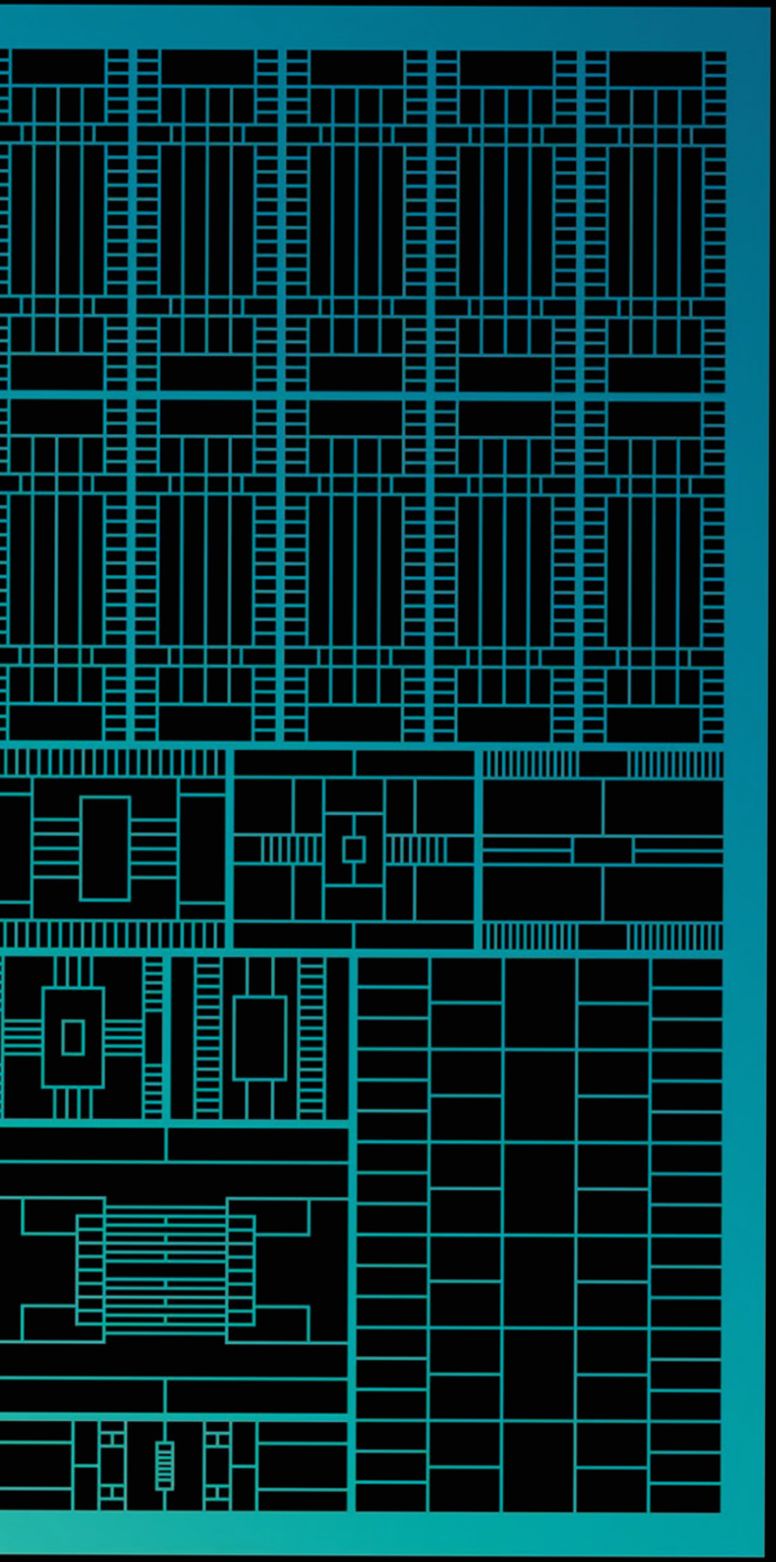
Double front-end fetch width

Wider and lower-latency vector FP

Next-generation ML accelerators



diversity period also led to a lack of coherence across the product lineup, leaving discerning Apple aficionados yearning for the seamless integration that once defined the brand.



## THE M4 REVOLUTION

Fast forward to 2024, and Apple has unveiled the first Macs equipped with the groundbreaking M4 family of chips. This strategic overhaul spans the MacBook Pro, iMac, and Mac Mini, signaling the beginning of a new era where uniformity and performance coalesce. The M4 chip, available in standard, Pro, and Max variants, is engineered using second-generation 3-nanometer technology, positioning it as the most advanced processor lineup for personal computers. The decision to **standardize the Mac lineup** with the M4 series is not merely a nod to consistency but a calculated move driven by the burgeoning influence of AI.

Apple Intelligence, the company's proprietary AI framework, demands unparalleled processing capabilities to deliver on its promise of transforming how users work, communicate, and express themselves. The M4 chips, with their enhanced CPU and GPU performance, robust machine learning accelerators, and efficient Neural Engine, are meticulously designed to meet these demands. This integration ensures that every Mac delivers a harmonious blend of speed, efficiency, and intelligent functionality regardless of its form factor.

To fully appreciate the significance of the M4 rollout, it's essential to reflect on Apple's historical refresh cycles. The last time Apple approached such comprehensive uniformity

Q4 Sales Tracker
1,343
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311
6.75%

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## 16-core CPU

12 performance cores

Improved branch prediction

10-wide instruction decode

40% larger reorder buffer

Next-generation ML accelerators

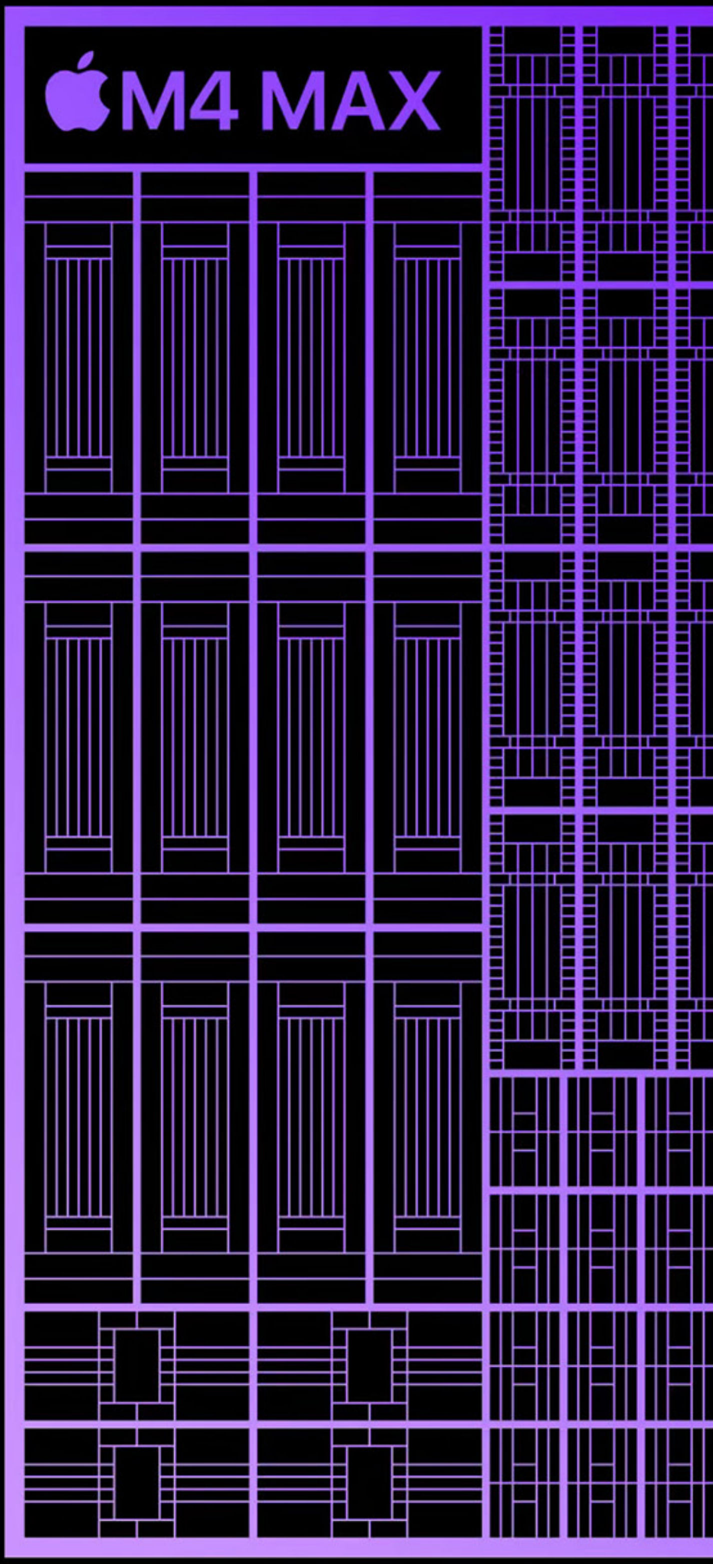
4 efficiency cores

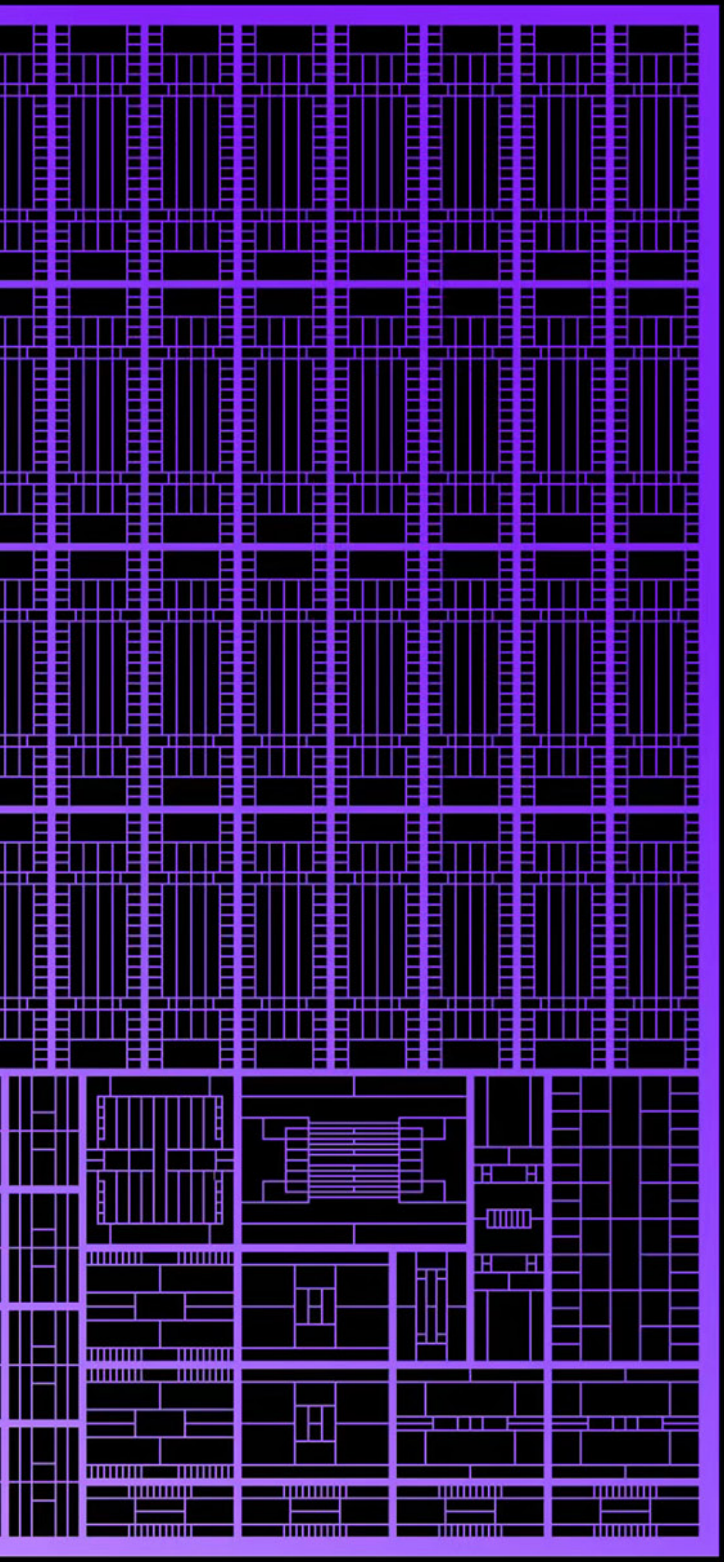
Improved branch prediction

Double front-end fetch width

Wider and lower-latency vector FP

Next-generation ML accelerators

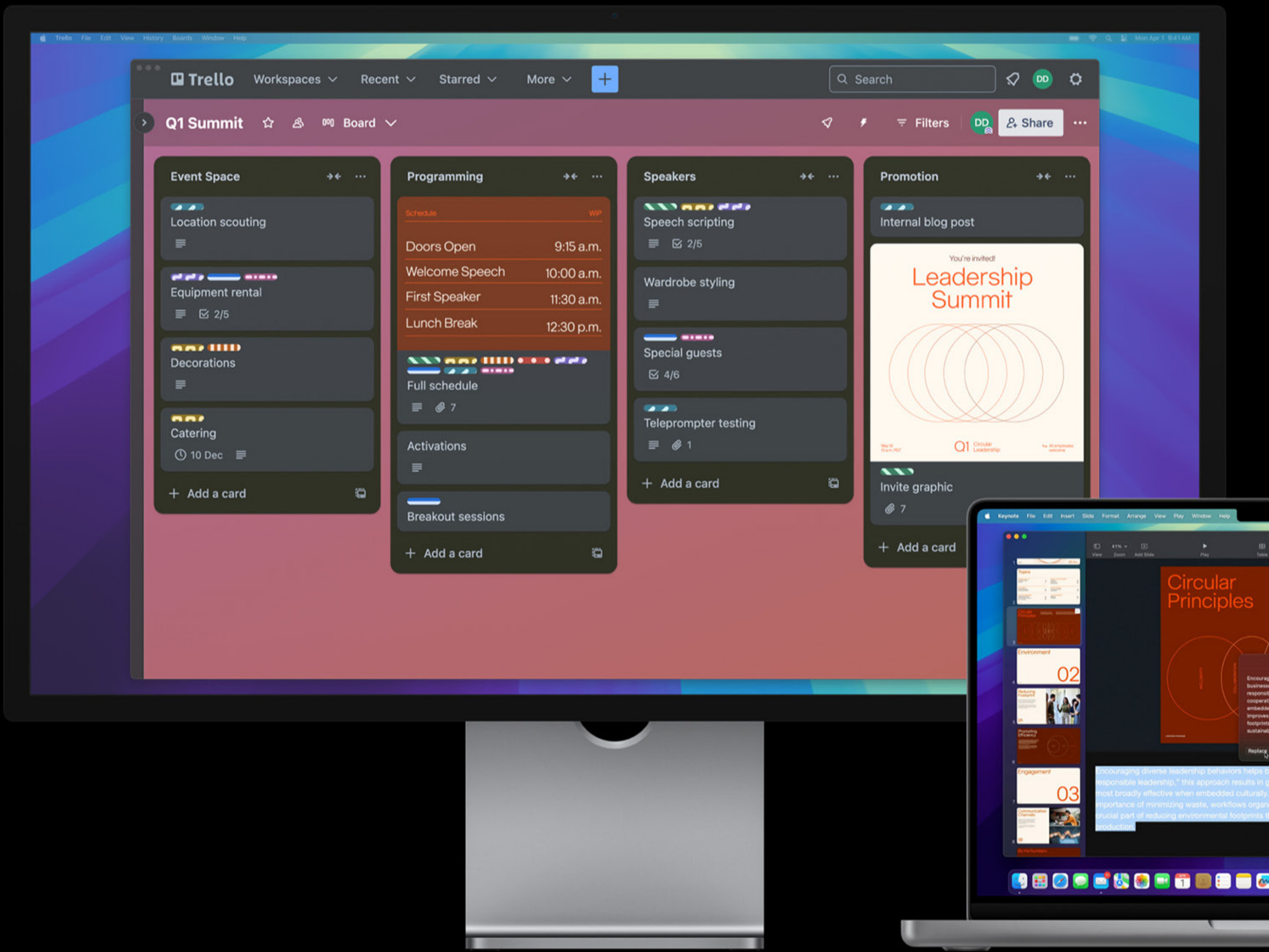




was in 2013, a year marked by **introducing the trashcan Mac Pro** alongside updates to the MacBook Air, MacBook Pro, iMac, and Mac Mini. Even then, the absence of an iMac Pro refresh underscored the challenges inherent in maintaining a perfectly synchronized product cycle. The M1 series came close to this ideal, **with an 18-month period during which almost every Mac model was upgraded**except for the Mac Pro. The latest M4 introduction surpasses this precedent by encompassing not just the consumer and professional segments but also paving the way for future expansions in the MacBook Air, Mac Studio, and Mac Pro lines. Bloomberg's Mark Gurman projected that the **MacBook Air would adopt the M4 chip in the spring of 2025** If these timelines hold, Apple will have achieved what few thought possible in over a decade: a genuinely unified Mac ecosystem.

## THE POWER OF M4

The initial wave of M4-equipped Macs introduced enhancements that elevate the user experience. The MacBook Pro, available in both 14-inch and 16-inch variants, stands out with its advanced 12MP Center Stage camera, the introduction of Thunderbolt 5 ports, and the novel nano-texture display option. These features, combined with the raw power of the M4 Pro and M4 Max chips, make the MacBook Pro a formidable tool for professionals and creatives. The M4 Pro variant, with its 14-core CPU and up to a 20-core GPU, offers a substantial performance boost, enabling faster workflows in demanding applications like geo-mapping, structural engineering, and data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First Speaker 11:30 a.m.
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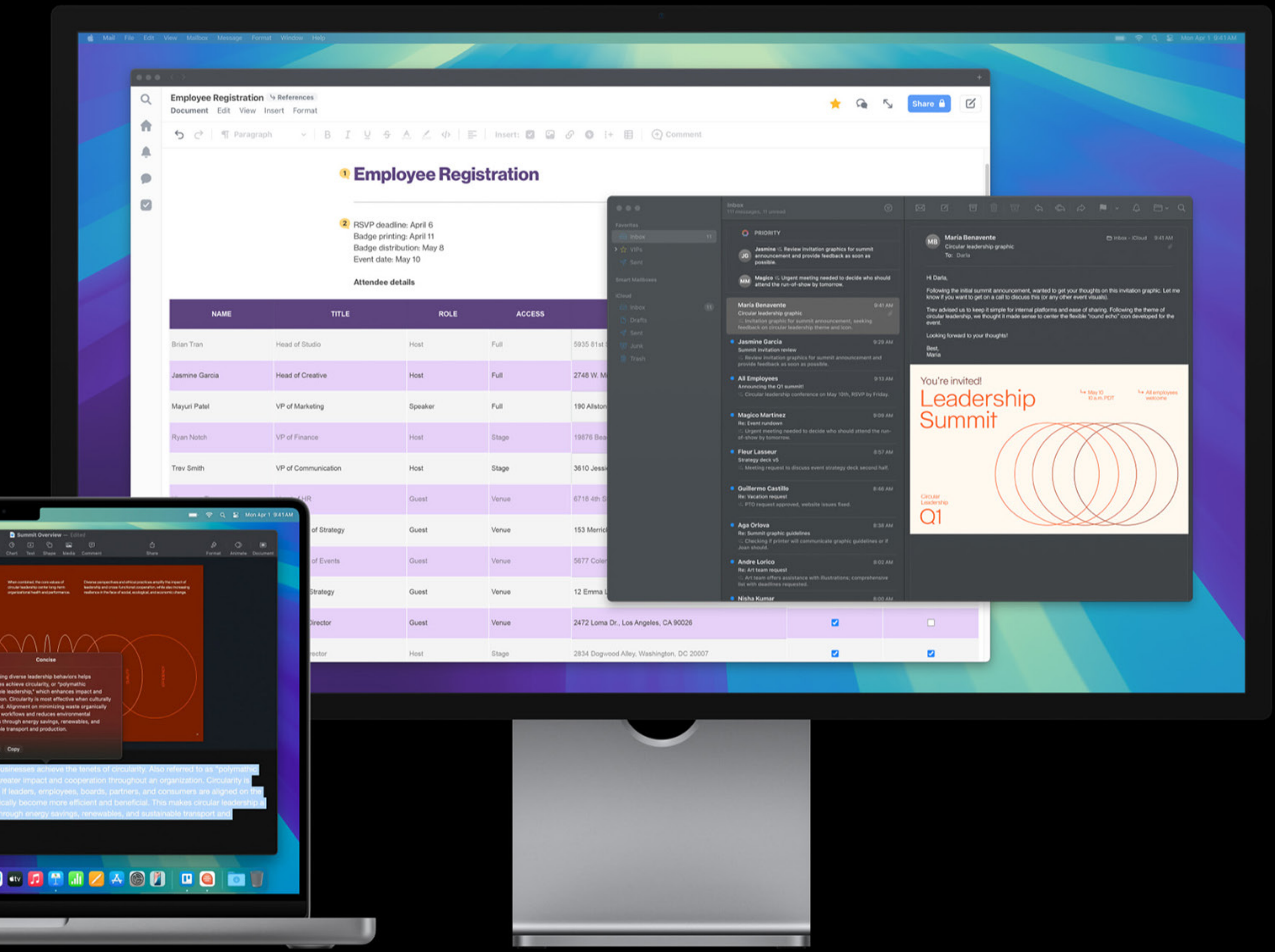
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modeling. For those pushing the boundaries of creative work, the M4 Max variant, boasting up to a 16-core CPU and a 40-core GPU, ensures that even the most intensive tasks—such as 3D animation, visual effects, and film scoring—are executed seamlessly.

Moreover, the enhanced Thunderbolt 5 ports more than double transfer speeds, facilitating quicker data transfers and more efficient connectivity with external devices. The introduction of the nano-texture display significantly reduces glare, making the MacBook Pro more versatile for outdoor use and bright environments. These hardware advancements are complemented by the integration of Apple Intelligence, which leverages on-device AI to offer features like system-wide writing tools, an enhanced Siri, and innovative capabilities like Image Playground and Genmoji.

At the heart of the **M4's prowess lies Apple Intelligence,** the company's ambitious AI framework designed to revolutionize user interaction with their devices. Apple Intelligence marries powerful generative models with stringent privacy protections, ensuring users can harness AI's full potential without compromising their data. The Neural Engine within the M4 chips accelerates AI-driven tasks, enabling real-time language processing, image recognition, and predictive analytics directly on the device. This integration is evident in features like system-wide writing tools, which allow users to rewrite, proofread, and summarize text across various applications. Siri, now more intelligent and versatile, seamlessly transitions between spoken and typed inputs, enhancing

## 14-core CPU

**10 performance cores**

Improved branch prediction

10-wide instruction decode

40% larger reorder buffer

Next-generation ML accelerators

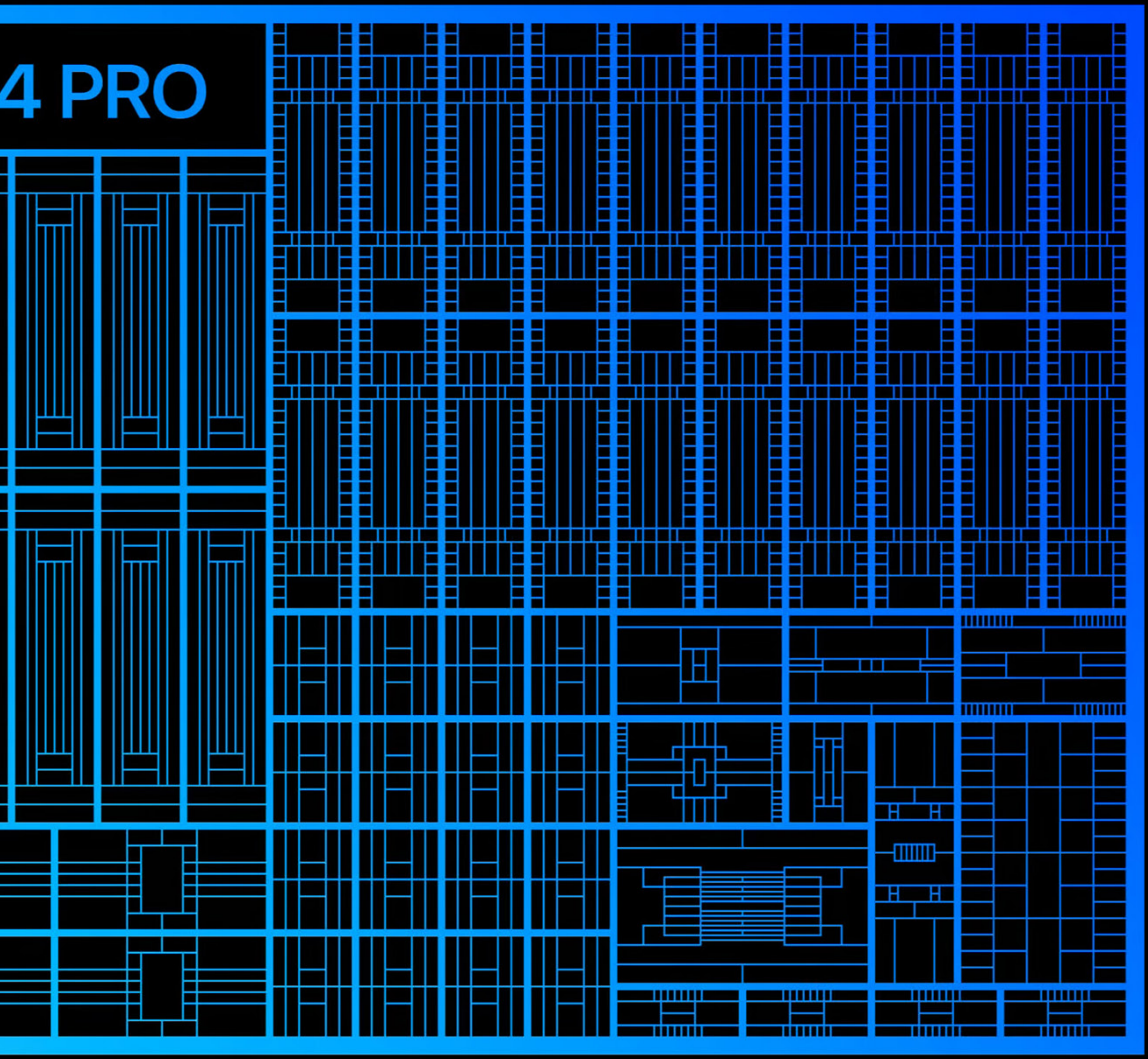
**4 efficiency cores**

Improved branch prediction

Double front-end fetch width

Wider and lower-latency vector FP

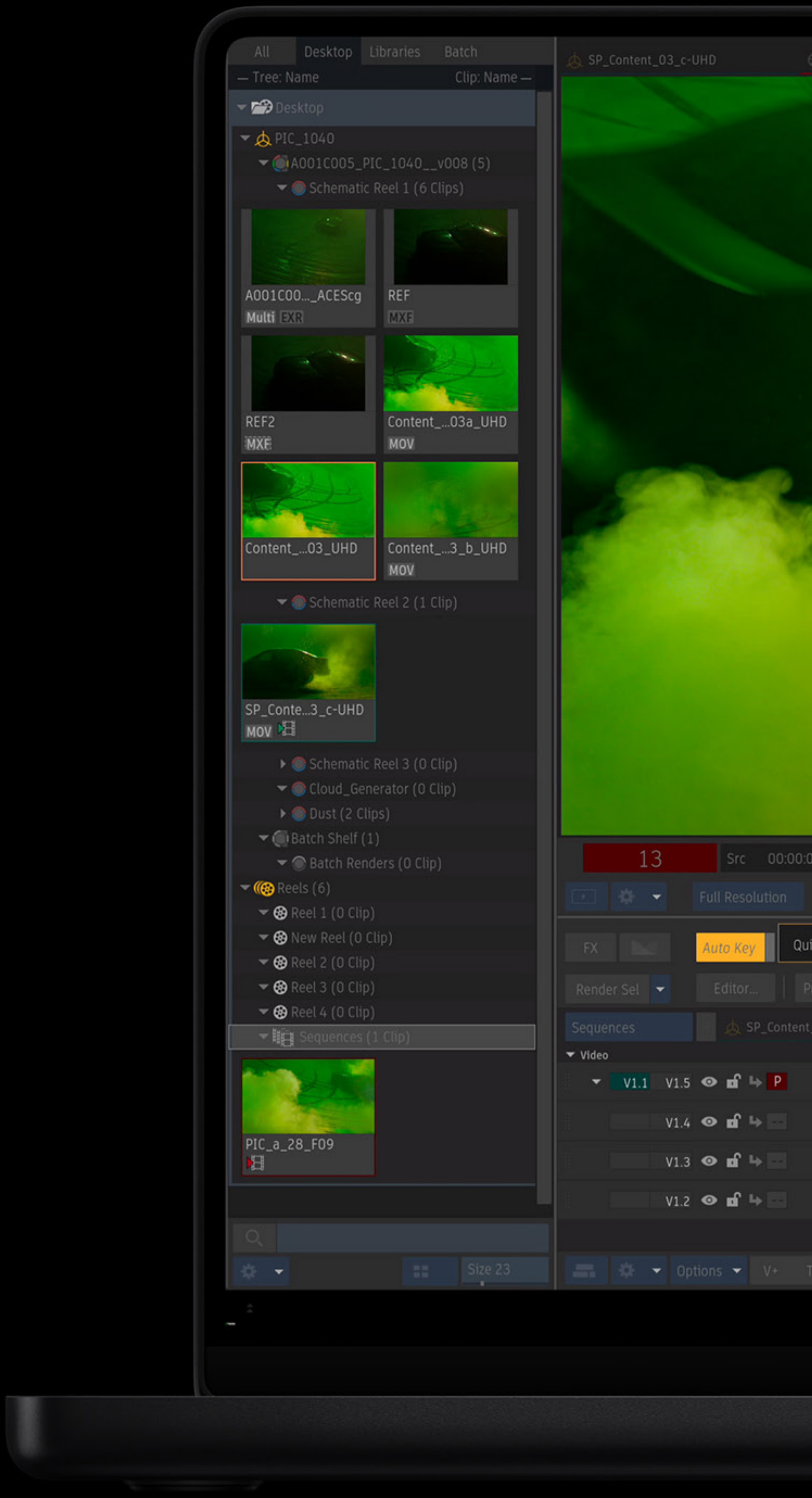
Next-generation ML accelerators


4 PRO

productivity and user engagement. Additionally, Apple Intelligence introduces elements like Image Playground and Genmoji, which empower users to create custom emojis and original images effortlessly.

The AI capabilities extend to privacy-preserving mechanisms, such as on-device processing and Private Cloud computing, ensuring that personal information remains secure. The inclusion of ChatGPT within Siri and Writing Tools further enriches the user experience, providing access to advanced conversational AI without switching between applications.

The M4-equipped Macs also bring significant advancements in display technology and connectivity options. The new nano-texture display option, featured in the MacBook Pro, dramatically reduces glare and reflections, enhancing visibility in various lighting conditions. With SDR content brightness reaching up to 1000 nits and HDR content peaking at 1600 nits, users can enjoy vibrant and clear visuals, whether working indoors or outdoors. Connectivity has also substantially improvede with the introduction of Thunderbolt 5 ports. These ports offer faster data transfer speeds of up to 120 Gb/s and enable more versatile connectivity options, allowing users to connect powerful docking stations and high-bandwidth peripherals easily. This enhancement is particularly beneficial for professionals who rely on multiple external devices, such as music producers, who can now streamline their studio setups with a single cable connection.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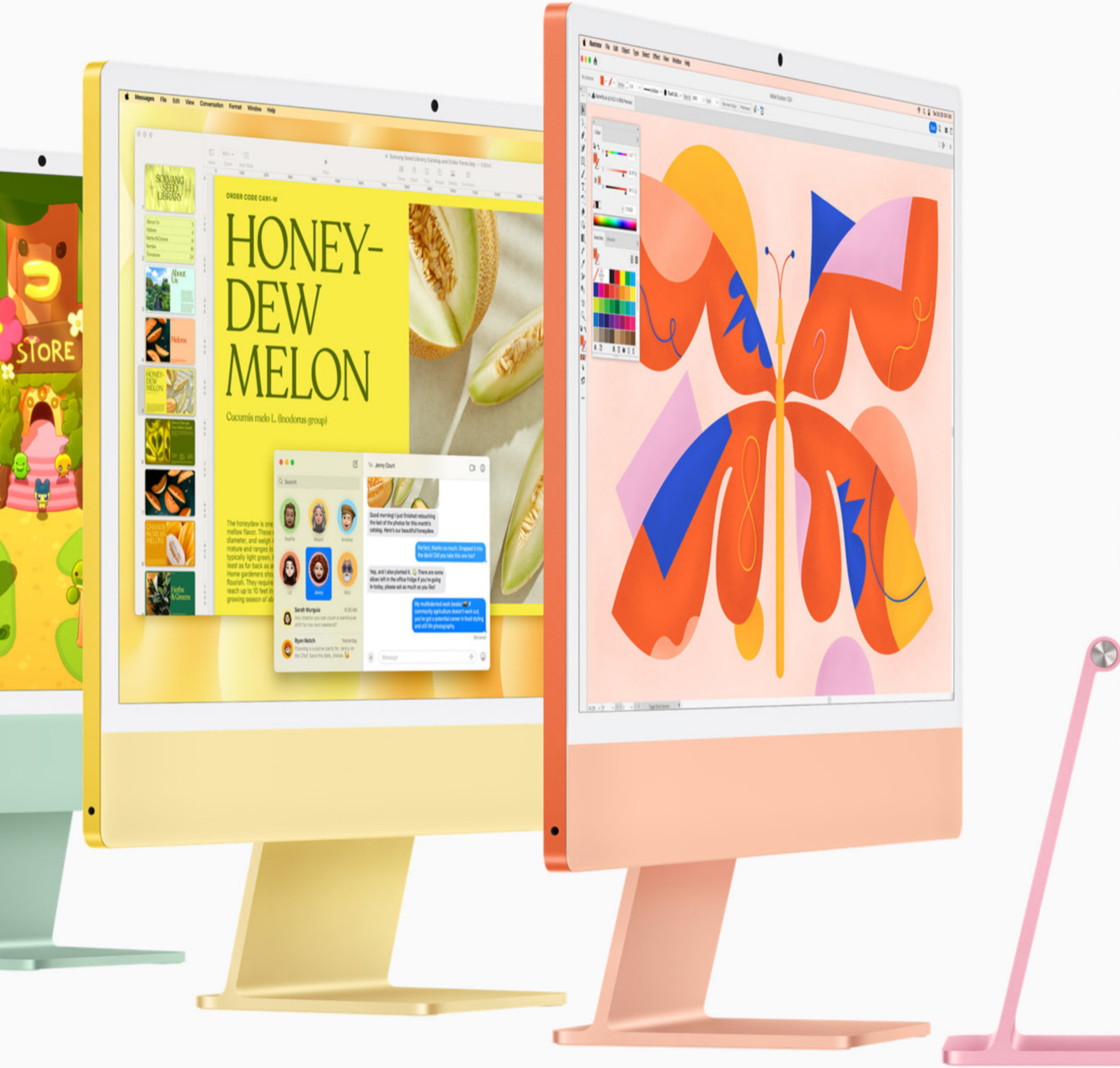
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## THE M4 IMPACT

The tech community and Apple enthusiasts have welcomed the M4 rollout with enthusiasm, recognizing it as a monumental step towards unifying the Mac ecosystem. A notable comment from a user highlighted the anticipation and hope for this newfound consistency, expressing a desire for predictability in future model releases. While some skeptics suggest this might be a temporary shift to phase out the M3 series, the overarching sentiment is optimism and excitement. The implications of this unified approach extend beyond Apple's product lineup. Competitors are likely to take notice, prompting similar strategies to streamline their offerings. Moreover, the focus on AI-driven performance positions Apple at the forefront of integrating intelligent systems within personal computing, setting new standards for user interaction and device capabilities.

The tech giant reinforces its commitment to a cohesive and robust ecosystem as Apple continues to roll out the M4 series across its remaining Mac models—anticipating the integration into the MacBook Air, Mac Studio, and Mac Pro by mid-2025. This uniformity simplifies the user experience and enhances software optimization, as developers can tailor applications to a consistent hardware foundation. The move also aligns with broader industry trends where AI and machine learning are becoming integral to device functionality. By embedding advanced AI capabilities within the core hardware, Apple ensures that its Macs remain relevant and capable of adapting to the evolving needs of users, from creative

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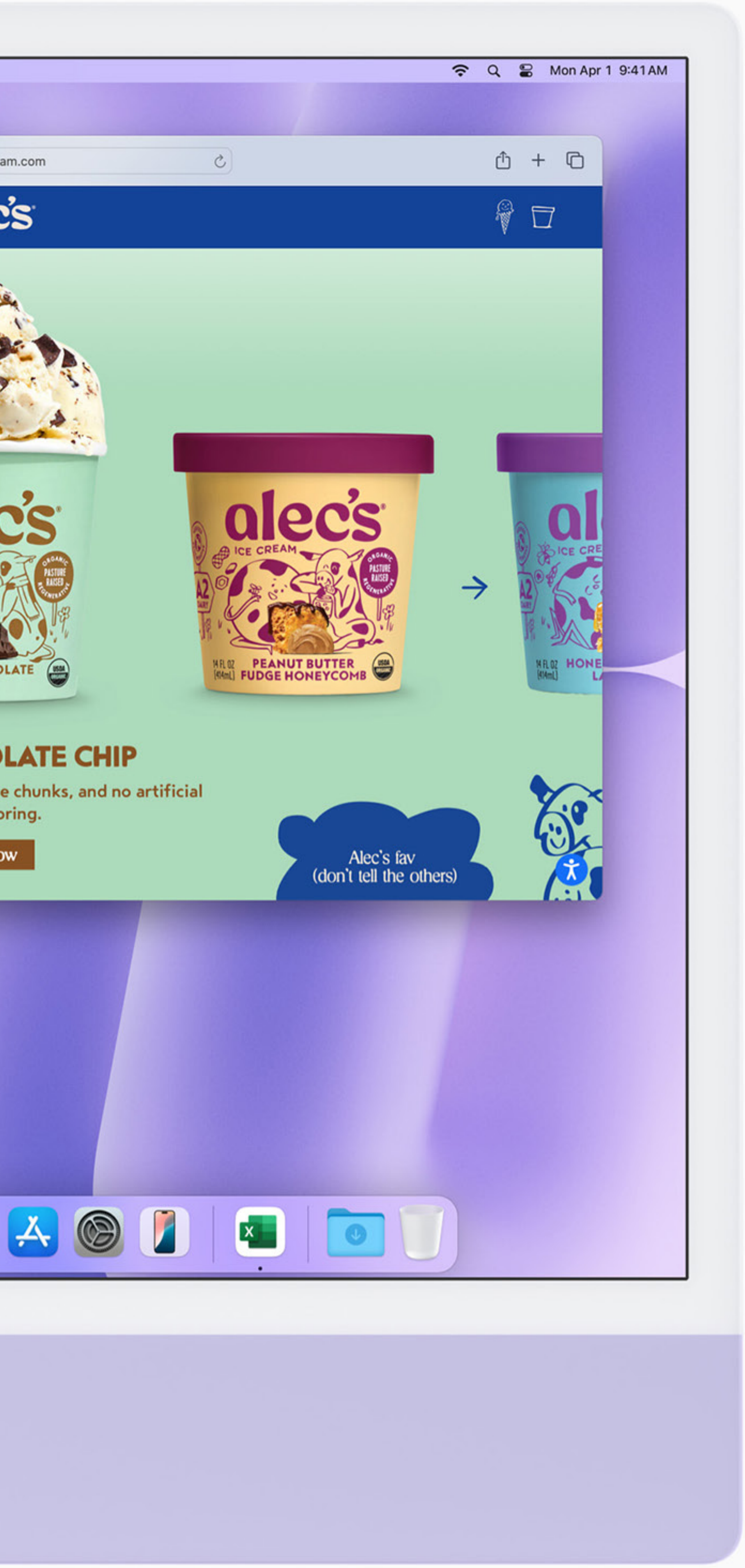
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professionals to researchers and everyday consumers.

The introduction of the M4 series marks a pivotal moment in Apple's history, bridging the gap between the diversified processor strategies of the past and a unified, AI-driven future. By standardizing its Mac lineup with the most advanced chips yet, Apple enhances performance and efficiency and delivers a more seamless and integrated user experience. This strategic alignment, underpinned by Apple Intelligence, positions the Mac ecosystem to thrive in an era where AI and intelligent computing are paramount.

Agriculture Management
Q2 Growing Season
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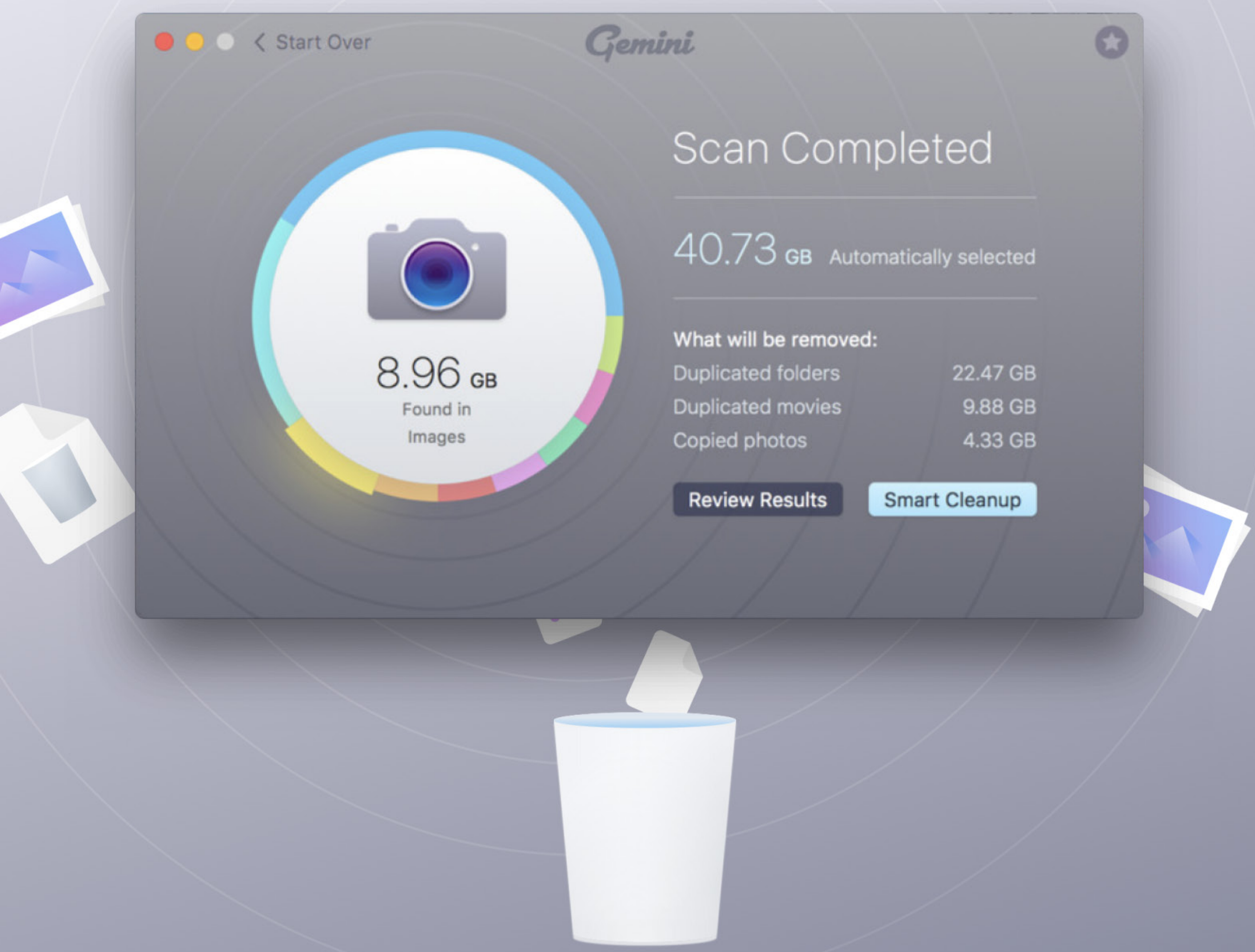
*As we look forward to the full rollout of the M4 series across all Mac models, Apple's commitment to consistency and innovation sets a new benchmark in the tech industry. We can't wait to see what comes next for Apple Intelligence and the M-powered Mac line-up.*



Start Over

Gemini

8.96 GB
Found in
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| Duplicated folders | 22.47 GB |
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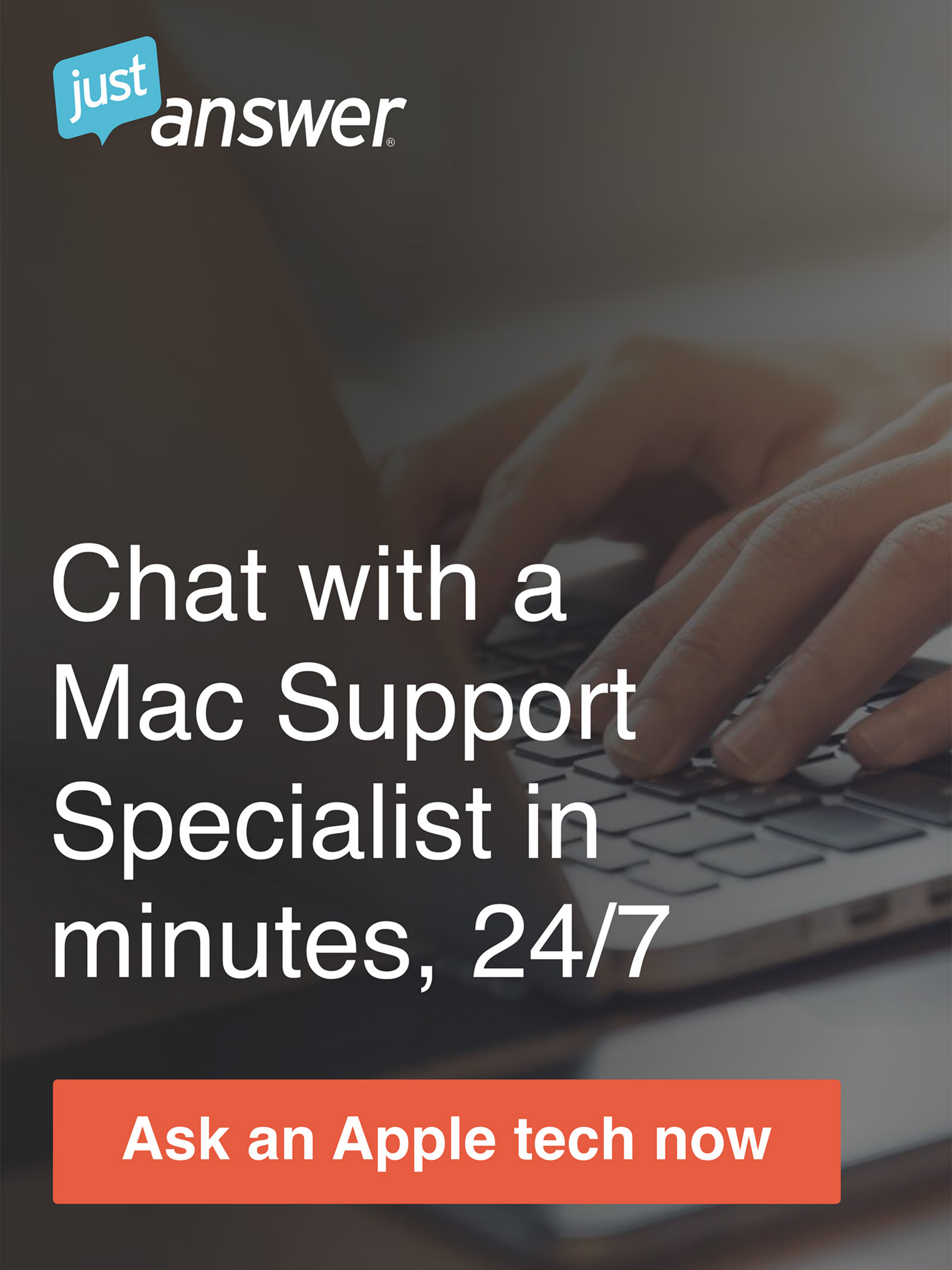

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# APPLE TO PAY $95 MILLION TO SETTLE LAWSUIT ACCUSING SIRI OF EAVESDROPPING

Apple has agreed to pay $95 million to settle a lawsuit accusing the privacy-minded company of deploying its virtual assistant Siri to eavesdrop on people using its iPhone and other trendy devices.

The proposed settlement filed last week in an Oakland, California, federal court would resolve a 5-year-old lawsuit revolving around allegations that Apple surreptitiously activated Siri to record conversations through iPhones and other devices equipped with the virtual assistant for more than a decade.

The alleged recordings occurred even when people didn't seek to activate the virtual assistant with the trigger words, "Hey, Siri." Some of the recorded conversations were then shared with advertisers in an attempt to sell their products to consumers more likely to be interested in the goods and services, the lawsuit asserted.

The allegations about a snoopy Siri contradicted Apple's long-running commitment to protect the privacy of its customers — a crusade that CEO Tim Cook has often framed as a fight to preserve "a fundamental human right."

Image: David Paul Morris

Apple isn’t acknowledging any wrongdoing in the settlement, which still must be approved by U.S. District Judge Jeffrey White. Lawyers in the case have proposed scheduling a Feb. 14 court hearing in Oakland to review the terms.

If the settlement is approved, tens of millions of consumers who owned iPhones and other Apple devices from Sept. 17, 2014, through the end of last year could file claims. Each consumer could receive up to $20 per Siri-equipped device covered by the settlement, although the payment could be reduced or increased, depending on the volume of claims. Only 3% to 5% of eligible consumers are expected to file claims, according to estimates in court documents.

Eligible consumers will be limited to seeking compensation on a maximum of five devices.

The settlement represents a sliver of the $705 billion in profits that Apple has pocketed since September 2014. It’s also a fraction of the roughly $1.5 billion that the lawyers representing consumers had estimated Apple could been required to pay if the company had been found of violating wiretapping and other privacy laws had the case gone to a trial.

The attorneys who filed the lawsuit may seek up to $29.6 million from the settlement fund to cover their fees and other expenses, according to court documents.

Image: Abdullah Güçlü

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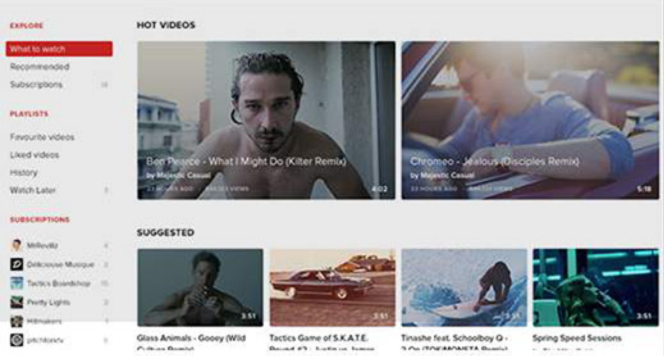

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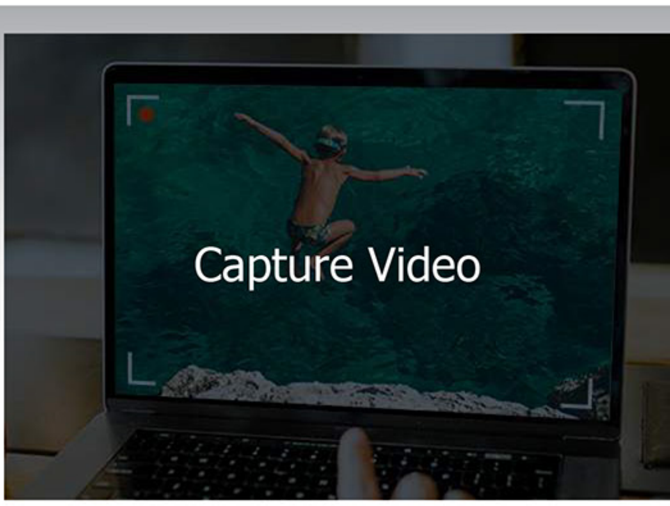

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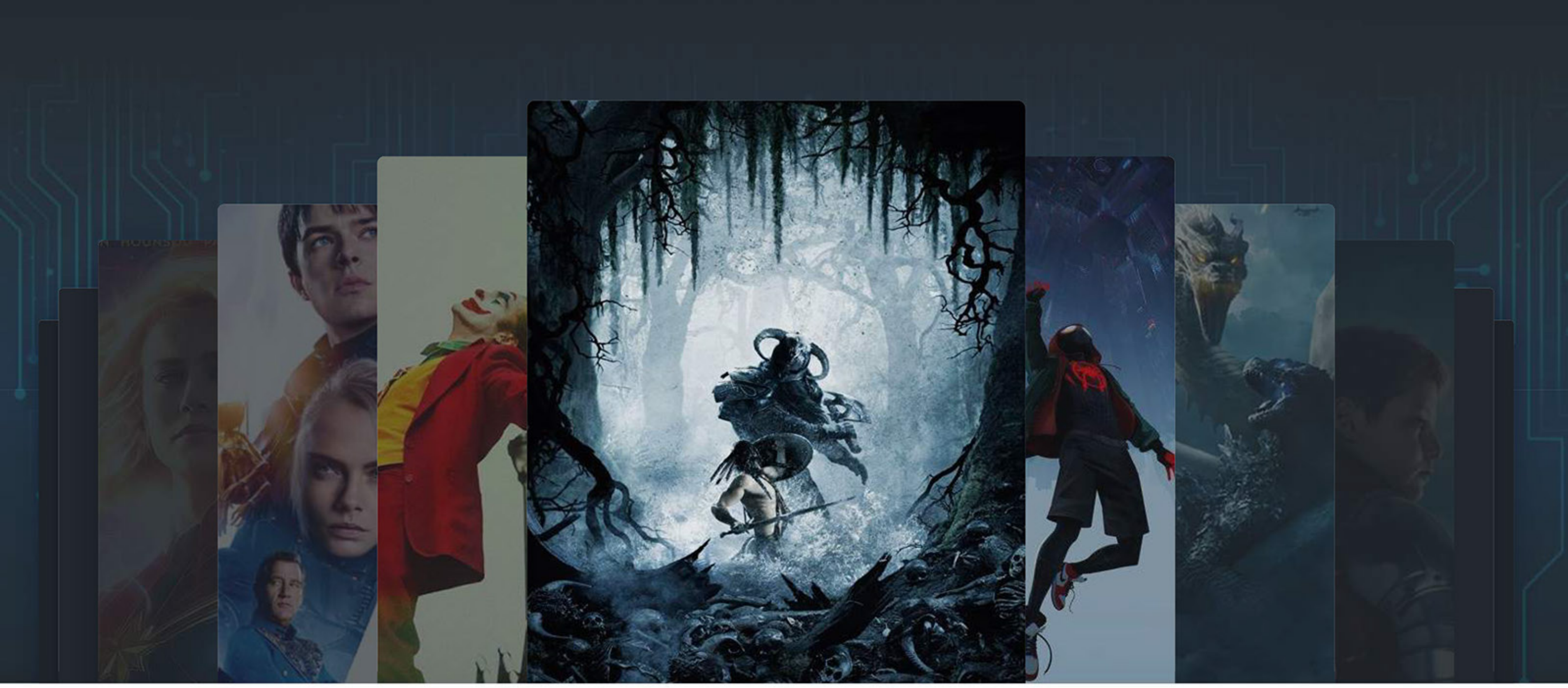

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AI

# IN 2024, ARTIFICIAL INTELLIGENCE WAS ALL ABOUT PUTTING AI TOOLS TO WORK

If 2023 was a year of wonder about artificial intelligence, 2024 was the year to try to get that wonder to do something useful without breaking the bank.

There was a "shift from putting out models to actually building products," said Arvind Narayanan, a Princeton University computer science professor and co-author of the new book "AI Snake Oil: What Artificial Intelligence Can Do, What It Can't, and How to Tell The Difference."

The first 100 million or so people who experimented with ChatGPT upon its release two years ago actively sought out the chatbot, finding it amazingly helpful at some tasks or laughably mediocre at others.

Now such generative AI technology is baked into an increasing number of technology services whether we're looking for it or not — for instance, through the AI-generated answers in Google search results or new AI techniques in photo editing tools.

"The main thing that was wrong with generative AI last year is that companies were releasing these really powerful models without a concrete way for people to make use of them," said Narayanan. "What we're seeing this year is gradually building out these products that can take advantage of those capabilities and do useful things for people."

At the same time, since OpenAI released GPT-4 in March 2023 and competitors introduced similarly performing AI large language models, these models have stopped getting significantly "bigger and qualitatively better," resetting overblown expectations that AI was racing every few months to some kind of better-than-human intelligence, Narayanan said. That's also meant that the public discourse has shifted from "is AI going to kill us?" to treating it like a normal technology, he said.

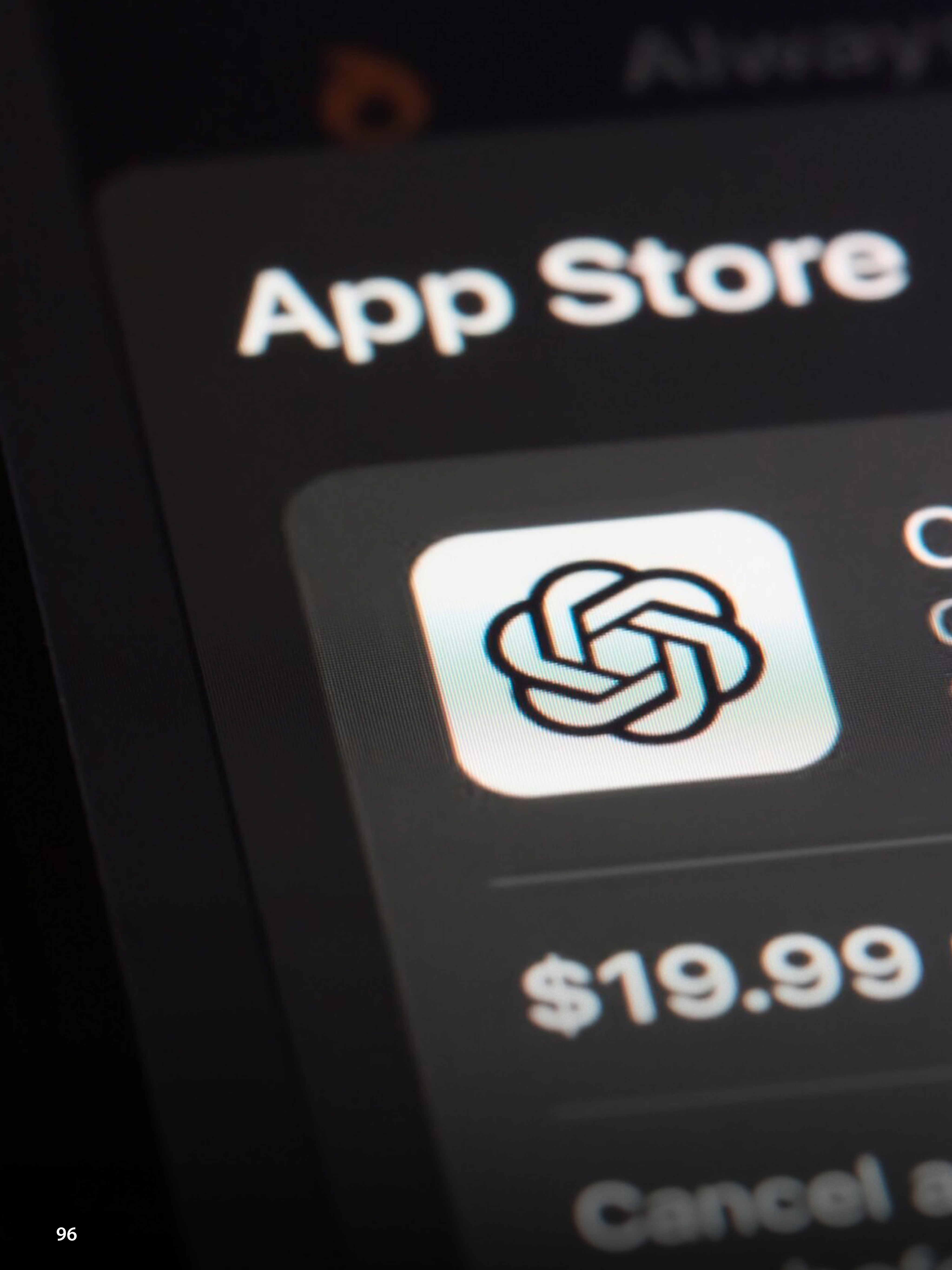
4

## AI'S STICKER SHOCK

On quarterly earnings calls this year, tech executives often heard questions from Wall Street analysts looking for assurances of future payoffs from huge spending on AI research and development. Building AI systems behind generative AI tools like OpenAI's ChatGPT or Google's Gemini requires investing in energy-hungry computing systems running on powerful and expensive AI chips. They require so much electricity that tech giants announced deals this year to tap into nuclear power to help run them.

"We're talking about hundreds of billions of dollars of capital that has been poured into this technology," said Goldman Sachs analyst Kash Rangan.

AI
AI
Message :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Another analyst at the New York investment bank drew attention over the summer by arguing AI isn't solving the complex problems that would justify its costs. He also questioned whether AI models, even as they're being trained on much of the written and visual data produced over the course of human history, will ever be able to do what humans do so well. Rangan has a more optimistic view.

"We had this fascination that this technology is just going to be absolutely revolutionary, which it has not been in the two years since the introduction of ChatGPT," Rangan said. "It's more expensive than we thought and it's not as productive as we thought."

Rangan, however, is still bullish about its potential and says that AI tools are already proving "absolutely incrementally more productive" in sales, design and a number of other professions.

## AI AND YOUR JOB

Some workers wonder whether AI tools will be used to supplement their work or to replace them as the technology continues to grow. The tech company Borderless AI has been using an AI chatbot from Cohere to write up employment contracts for workers in Turkey or India without the help of outside lawyers or translators.

Video game performers with the Screen Actors Guild-American Federation of Television and Radio Artists who went on strike in July said they feared AI could reduce or eliminate job opportunities because it could be used to replicate one performance into a number of other movements without their consent.

AI

Concerns about how movie studios will use AI helped fuel last year's film and television strikes by the union, which lasted four months. Game companies have also signed side agreements with the union that codify certain AI protections in order to keep working with actors during the strike.

Musicians and authors have voiced similar concerns over AI scraping their voices and books. But generative AI still can't create unique work or "completely new things," said Walid Saad, a professor of electrical and computer engineering and AI expert at Virginia Tech.

"We can train it with more data so it has more information. But having more information doesn't mean you're more creative," he said. "As humans, we understand the world around us, right? We understand the physics. You understand if you throw a ball on the ground, it's going to bounce. AI tools currently don't understand the world."

Saad pointed to a meme about AI as an example of that shortcoming. When someone prompted an AI engine to create an image of salmon swimming in a river, he said, the AI created a photo of a river with cut pieces of salmon found in grocery stores.

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“What AI lacks today is the common sense that humans have, and I think that is the next step,” he said.

## AN ‘AGENTIC FUTURE’

That type of reasoning is a key part of the process of making AI tools more useful to consumers, said Vijoy Pandey, senior vice president of Cisco’s innovation and incubation arm, Outshift. AI developers are increasingly pitching the next wave of generative AI chatbots as AI “agents” that can do more useful things on people’s behalf.

That could mean being able to ask an AI agent an ambiguous question and have the model able to reason and plan out steps to solving an ambitious problem, Pandey said. A lot of technology, he said, is going to move in that direction in 2025.

Pandey predicts that eventually, AI agents will be able to come together and perform a job the way multiple people come together and solve a problem as a team rather than simply accomplishing tasks as individual AI tools. The AI agents of the future will work as an ensemble, he said.

Future Bitcoin software, for example, will likely rely on the use of AI software agents, Pandey said. Those agents will each have a specialty, he said, with “agents that check for correctness, agents that check for security, agents that check for scale.”

“We’re getting to an agentic future,” he said. “You’re going to have all these agents being very good at certain skills, but also have a little bit of a character or color to them, because that’s how we operate.”

## AI MAKES GAINS IN MEDICINE

AI tools have also streamlined, or lent in some cases a literal helping hand, to the medical field. This year’s Nobel Prize in chemistry — one of two Nobels awarded to AI-related science — went to work led by Google that could help discover new medicines.

Saad, the Virginia Tech professor, said that AI has helped bring faster diagnostics by quickly giving doctors a starting point to launch from when determining a patient’s care. AI can’t detect disease, he said, but it can quickly digest data and point out potential problem areas for a real doctor to investigate. As with other arenas, however, it poses a risk of perpetuating falsehoods.

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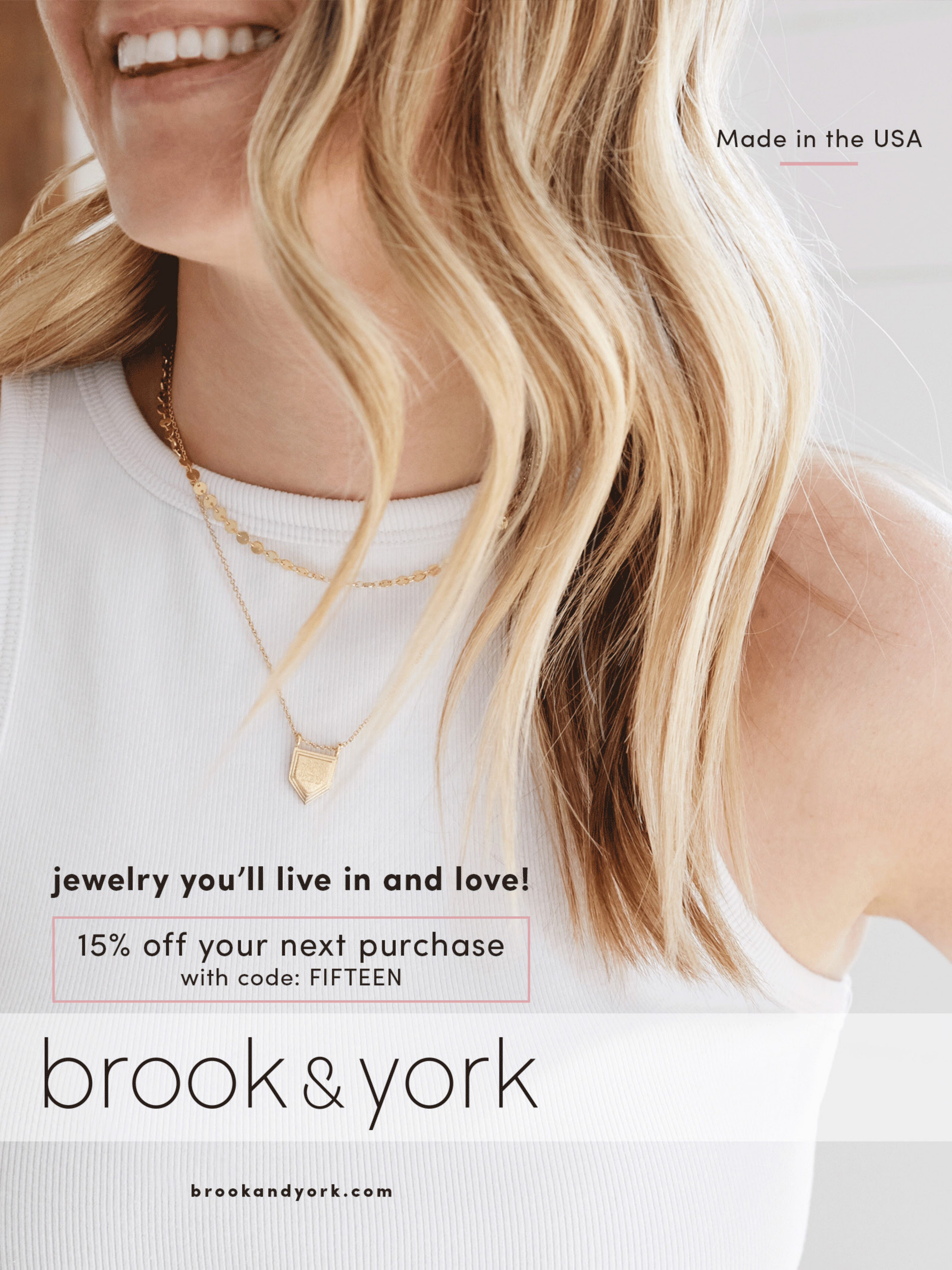
Tech giant OpenAI has touted its AI-powered transcription tool Whisper as having near “human level robustness and accuracy,” for example. But experts have said that Whisper has a major flaw: It is prone to making up chunks of text or even entire sentences.

Pandey, of Cisco, said that some of the company’s customers who work in pharmaceuticals have noted that AI has helped bridge the divide between “wet labs,” in which humans conduct physical experiments and research, and “dry labs” where people analyze data and often use computers for modeling.

When it comes to pharmaceutical development, that collaborative process can take several years, he said — with AI, the process can be cut to a few days.

“That, to me, has been the most dramatic use,” Pandey said.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# FROM AI ASSISTANTS TO HOLOGRAPHIC DISPLAYS, AUTOMAKERS SHOWCASE IN-CABIN EXPERIENCES AT CES

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Interior lighting aimed at reducing motion sickness. Shiny holographic dashboards displayed on windshields. And AI-powered voice assistants paired with infotainment systems to keep you company on long drives.

Automakers pulled out all the stops to showcase their latest advances for in-vehicle experiences at CES, the Consumer Technology Association's annual trade show of all things tech, in Las Vegas this week. Hyundai Mobis unveiled a full-windshield holographic technology, while BMW spotlighted its new "iDrive" panoramic display. And Honda and Sony Honda Mobility showed what consumers can expect with their upcoming electric vehicles.

Many of these driving enhancements aim to "make life on board more comfortable," explains Axel Maschka, executive vice president and head of the business division at Hyundai Mobis. And for some consumers today, he adds, "this 'living space'" of a car's interior has become a dominant part of a vehicle's appeal.

Hyundai Mobis' holographic windshield display provides a glimpse into that. The technology, which won't be on the market for at least several more years, projects information ranging from driving speed to safety alerts across the entire windshield, and also provides some entertainment options for those who aren't behind the wheel. To keep the driver's eyes on the road, the panoramic display looks different depending on where you sit. A demo from the South Korean company show the front row passenger can watch a movie or play a video game projected ahead of them, for example, but it's not visible to the driver.

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Maschka claims the holographic windshield gives drivers an easier view of key information in their line of sight and keeps other distractions in the car out of sight.

And Hyundai Mobis isn’t the only one giving the view from cars’ front seats a makeover. BMW also showed off its new Panoramic iDrive and Operating System X this week.

BMW’s iDrive will soon be featured in all of new models that will hit the market starting at the end of this year. The system projects a panoramic display onto the vehicles’ lower windscreen — controlled by a touchscreen below and voice commands — and can be personalized by different colors, apps and other preferences.

Honda and Sony Honda Mobility also spotlighted in-cabin features that drivers will soon encounter in their new EV lineup.

Sony Honda Mobility says “Afeela 1” will include an interactive AI-powered voice agent. In Monday’s remarks, CEO Yasuhide Mizuno said that “customers can be entertained by communicating with Afeela 1” — noting that Afeela’s agent is “focused on conversation” and “proactively talks to you” to provide useful information as you drive.

The Afeela 1, scheduled to go on sale later this year with deliveries anticipated for mid-2026, also touts a panoramic screen and infotainment system filled with a variety of entertainment apps. Online reservations for the car opened in California this week.

Meanwhile, Honda spotlighted “ultra-personal optimization” for customers of its upcoming 0

series of election vehicles — the first two models of which are set to launch in North America next year. The Japanese car giant unveiled the operating system that it plans to use in all 0 series models, "AISMO OS," which it says will be integrated into vehicle operations ranging from automated driving and advanced driver assistance to in-car infotainment.

In-vehicle software functions will also continue to be updated after purchase. "The more it is used, the more personalized it will become," Katsushi Inoue, global head of electrification business development at Honda, said in Tuesday remarks.

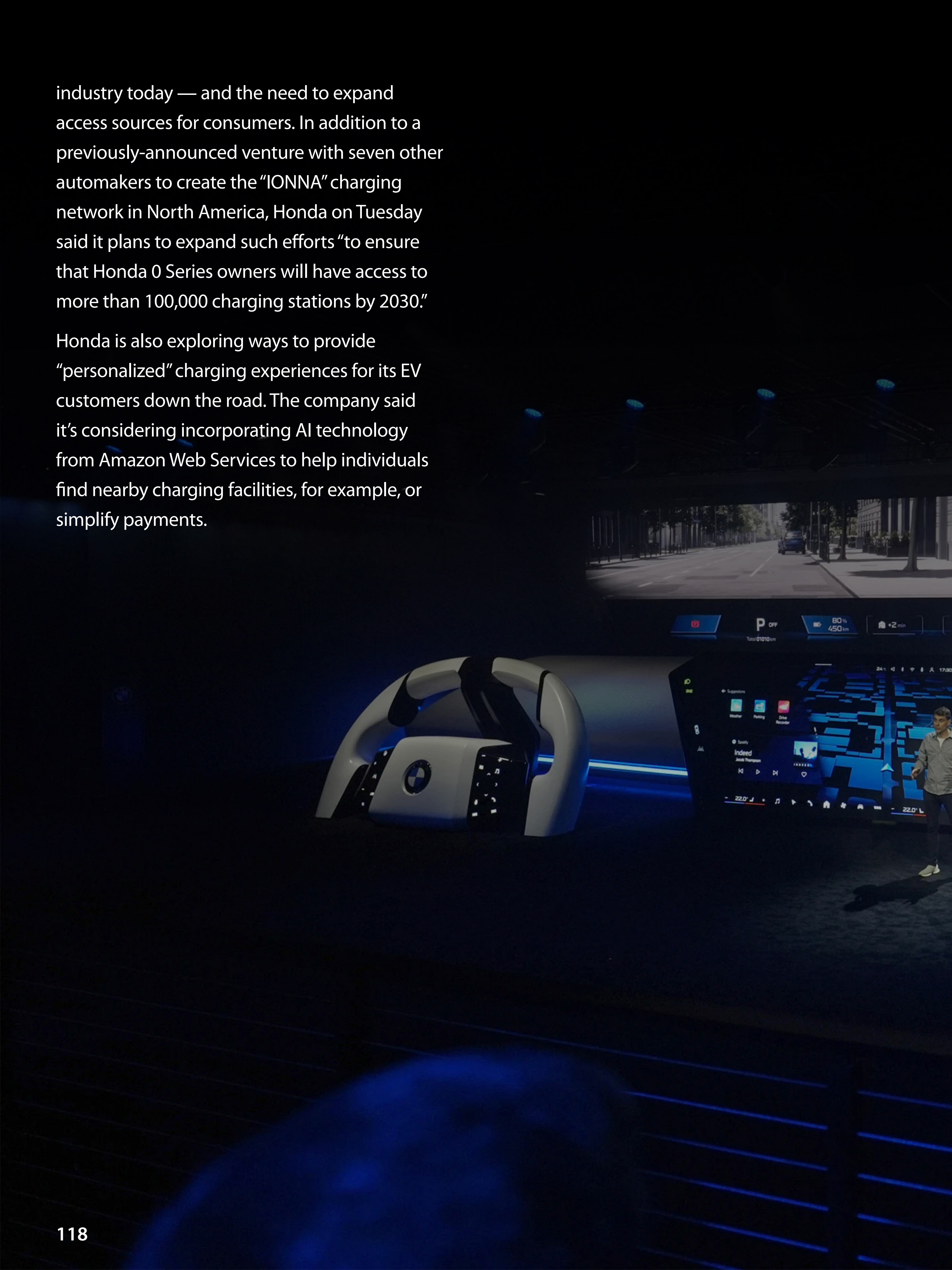
While there's ample excitement around the latest bells and whistles announced from car companies like those on display at CES this week, questions also emerged about how many new features are too many features.

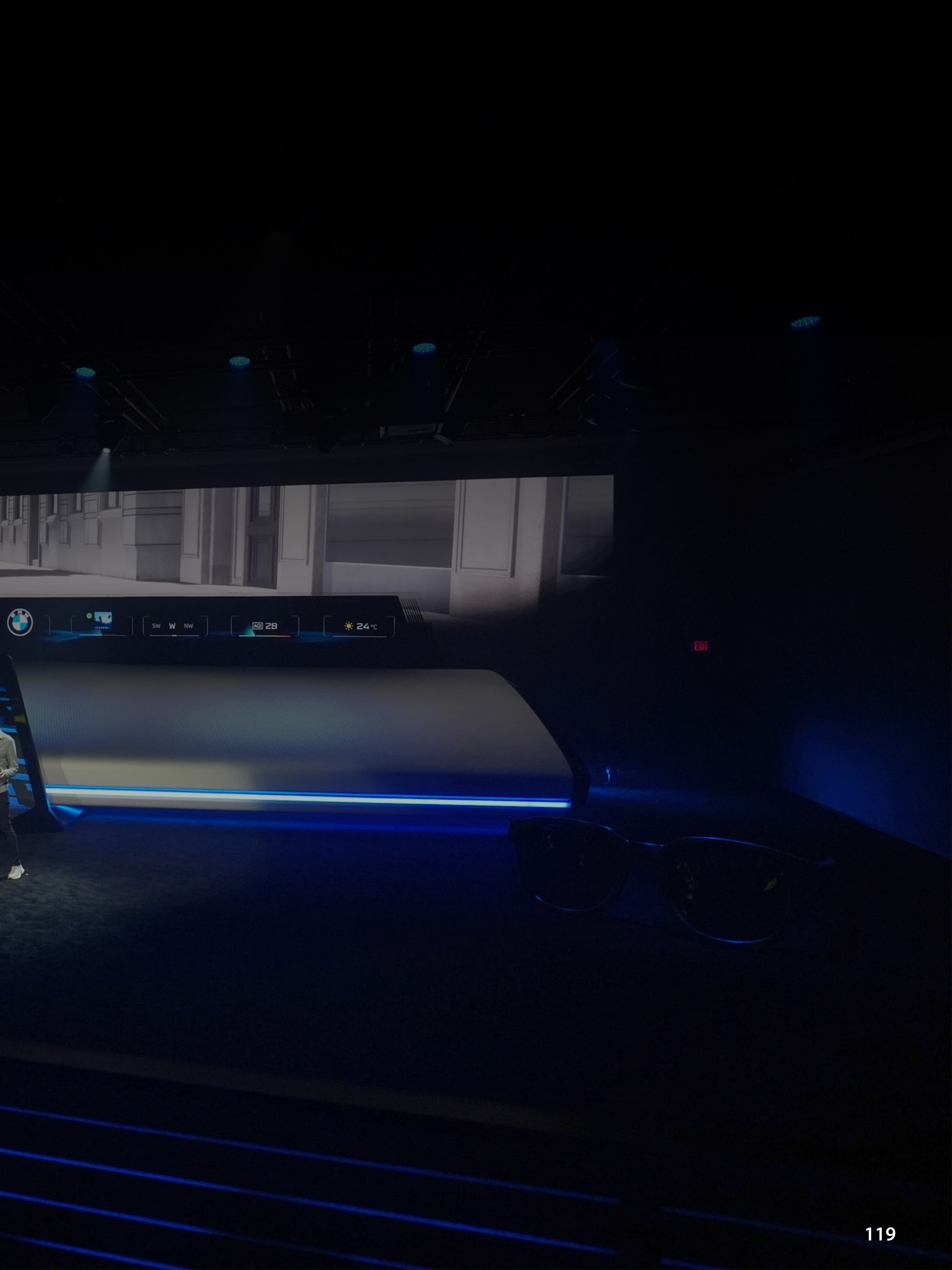
"It's definitely easy to get a little bit overwhelmed by the amount of technology in cars ... especially when you have cars that have three, four, five (or) six different touchscreens that offer different interfaces," said Tim Stevens, an automotive analyst and freelance journalist who attended CES this week.

But, Stevens added, this also shows how promising the integration of technology like AI can be — such as with in-car voice assistants. If you can "have a conversation with your car" to ask for detailed directions or restaurant suggestions, he explains, that can reduce distractions like trying to reach for your phone.

In addition to in-vehicle experiences, EVs showcased at CES this week also put a spotlight on the state of sustainable energy in the car industry today — and the need to expand access sources for consumers. In addition to a previously-announced venture with seven other automakers to create the "IONNA" charging network in North America, Honda on Tuesday said it plans to expand such efforts "to ensure that Honda 0 Series owners will have access to more than 100,000 charging stations by 2030."

Honda is also exploring ways to provide "personalized" charging experiences for its EV customers down the road. The company said it's considering incorporating AI technology from Amazon Web Services to help individuals find nearby charging facilities, for example, or simplify payments.

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# AI IS A GAME CHANGER FOR STUDENTS WITH DISABILITIES. SCHOOLS ARE STILL LEARNING TO HARNESS IT

For Makenzie Gilkison, spelling is such a struggle that a word like rhinoceros might come out as “rineanswsaurs” or sarcastic as “srkastik.”

The 14-year-old from suburban Indianapolis can sound out words, but her dyslexia makes the process so draining that she often struggles with comprehension. “I just assumed I was stupid,” she recalled of her early grade school years.

But assistive technology powered by artificial intelligence has helped her keep up with classmates. In 2023, Makenzie was named to the National Junior Honor Society. She credits a customized AI-powered chatbot, a word

prediction program and other tools that can read for her.

"I would have just probably given up if I didn't have them," she said.

Artificial intelligence holds the promise of helping countless other students with a range of visual, speech, language and hearing impairments to execute tasks that come easily to others. Schools everywhere have been wrestling with how and where to incorporate AI, but many are fast-tracking applications for students with disabilities.

Getting the latest technology into the hands of students with disabilities is a priority for the U.S. Education Department, which has told schools they must consider whether students need tools like text-to-speech and alternative communication devices. New rules from the Department of Justice also will require schools and other government entities to make apps and online content accessible to those with disabilities.

There is concern about how to ensure students using it — including those with disabilities — are still learning.

Students can use artificial intelligence to summarize jumbled thoughts into an outline, summarize complicated passages, or even translate Shakespeare into common English. And computer-generated voices that can read passages for visually impaired and dyslexic students are becoming less robotic and more natural.

"I'm seeing that a lot of students are kind of exploring on their own, almost feeling like they've found a cheat code in a video game,"

said Alexis Reid, an educational therapist in the Boston area who works with students with learning disabilities. But in her view, it is far from cheating: "We're meeting students where they are."

Ben Snyder, a 14-year-old freshman from Larchmont, New York, who was recently diagnosed with a learning disability, has been increasingly using AI to help with homework.

"Sometimes in math, my teachers will explain a problem to me, but it just makes absolutely no sense," he said. "So if I plug that problem into AI, it'll give me multiple different ways of explaining how to do that."

He likes a program called Question AI. Earlier in the day, he asked the program to help him write an outline for a book report — a task he completed in 15 minutes that otherwise would have taken him an hour and a half because of his struggles with writing and organization. But he does think using AI to write the whole report crosses a line.

"That's just cheating," Ben said.

Schools have been trying to balance the technology's benefits against the risk that it will do too much. If a special education plan sets reading growth as a goal, the student needs to improve that skill. AI can't do it for them, said Mary Lawson, general counsel at the Council of the Great City Schools.

But the technology can help level the playing field for students with disabilities, said Paul Sanft, director of a Minnesota-based center where families can try out different assistive technology tools and borrow devices.

"There are definitely going to be people who use some of these tools in nefarious ways. That's always going to happen," Sanft said. "But I don't think that's the biggest concern with people with disabilities, who are just trying to do something that they couldn't do before."

Another risk is that AI will track students into less rigorous courses of study. And, because it is so good at identifying patterns, AI might be able to figure out a student has a disability. Having that disclosed by AI and not the student or their family could create ethical dilemmas, said Luis Pérez, the disability and digital inclusion lead at CAST, formerly the Center for Applied Specialized Technology.

Schools are using the technology to help students who struggle academically, even if they do not qualify for special education services. In Iowa, a new law requires students deemed not proficient — about a quarter of them — to get an individualized reading plan. As part of that effort, the state's education department spent $3 million on an AI-driven personalized tutoring program. When students struggle, a digital avatar intervenes.

More AI tools are coming soon.

The U.S. National Science Foundation is funding AI research and development. One firm is developing tools to help children with speech and language difficulties. Called the National AI Institute for Exceptional Education, it is headquartered at the University of Buffalo, which did pioneering work on handwriting recognition that helped the U.S. Postal Service save hundreds of millions of dollars by automating processing.

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“We are able to solve the postal application with very high accuracy. When it comes to children’s handwriting, we fail very badly,” said Venu Govindaraju, the director of the institute. He sees it as an area that needs more work, along with speech-to-text technology, which isn’t as good at understanding children’s voices, particularly if there is a speech impediment.

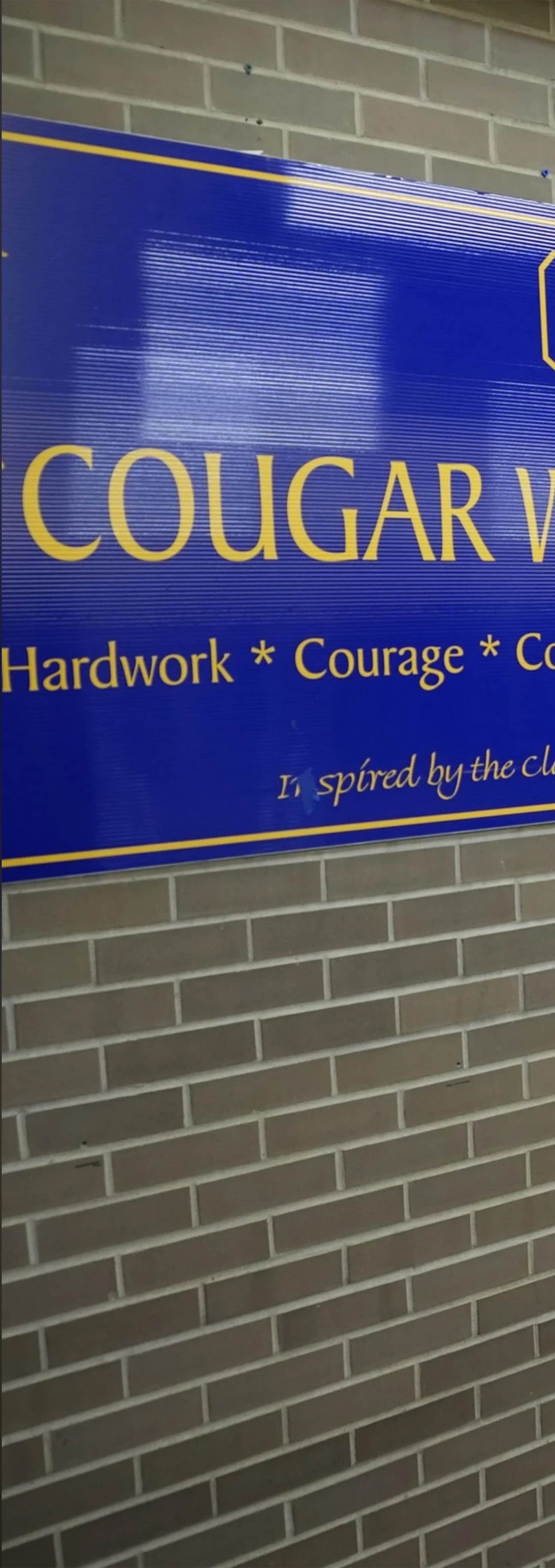
Sorting through the sheer number of programs developed by education technology companies can be a time-consuming challenge for schools. Richard Culatta, CEO of the International Society for Technology in Education, said the nonprofit launched an effort this fall to make it easier for districts to vet what they are buying and ensure it is accessible.

Makenzie wishes some of the tools were easier to use. Sometimes a feature will inexplicably be turned off, and she will be without it for a week while the tech team investigates. The challenges can be so cumbersome that some students resist the technology entirely.

But Makenzie’s mother, Nadine Gilkison, who works as a technology integration supervisor at Franklin Township Community School Corporation in Indiana, said she sees more promise than downside.

In September, her district rolled out chatbots to help special education students in high school. She said teachers, who sometimes struggled to provide students the help they needed, became emotional when they heard about the program. Until now, students were reliant on someone to help them, unable to move ahead on their own.

“Now we don’t need to wait anymore,” she said.



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# NEW LABELS WILL HELP PEOPLE PICK DEVICES LESS AT RISK OF HACKING

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The federal government is rolling out a consumer labeling system designed to help Americans pick smart devices that are less vulnerable to hacking.

Under the voluntary program, called the U.S. Cyber Trust Mark Initiative, manufacturers can affix the label on their products if they meet federal cybersecurity standards. The types of devices that can seek to carry the label include baby monitors, home security cameras, fitness trackers, refrigerators and other internet-connected appliances.

The labels will include a distinctive shield logo as well as QR codes that consumers can scan for more information about the security of the device. Products bearing the label should be available this year, once manufacturers begin submitting their devices for approval, said deputy national security adviser Anne Neuberger, who briefed reporters on the new program this week.

“It gives consumers an easy way to check if a home alarm system or baby monitor is cyber safe,” Neuberger said, noting that the average American household now has 21 devices that are connected to the internet — each presenting a possible entry point for cybercriminals.

Amazon, Best Buy, Google, LG Electronics USA, Logitech and Samsung are among industry participants.

Even though it’s voluntary, the program will help consumers know which brands to trust — by clicking on the QR code, they’ll be able to access even more information about cybersecurity, including whether the manufacturer provides software updates to protect against new cyberthreats, according to

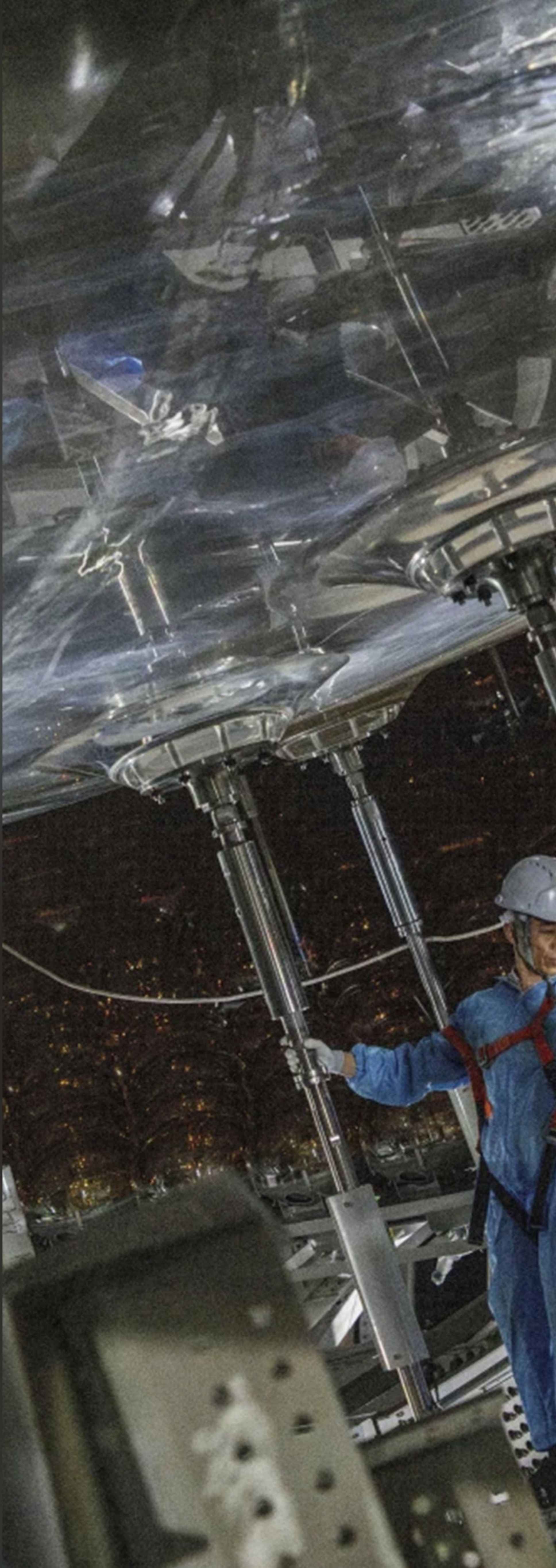
Justin Brookman, director of technology policy at Consumer Reports.

First proposed by the Biden administration 18 months ago, the labels were approved last year by the Federal Communications Commission, the agency tasked with leading the program. Last month, the FCC selected 11 companies and organizations to oversee the technical designation of products bearing the labels.

Officials compare the labels to the Energy Star program, which rates appliances' energy efficiency, and say the idea is to give consumers more information about the products they buy while also encouraging manufacturers to enhance their cybersecurity.

The proliferation of so-called smart devices has coincided with growing cybercrime in which one insecure device can often give cyberintruders a dangerous foothold on a home network.

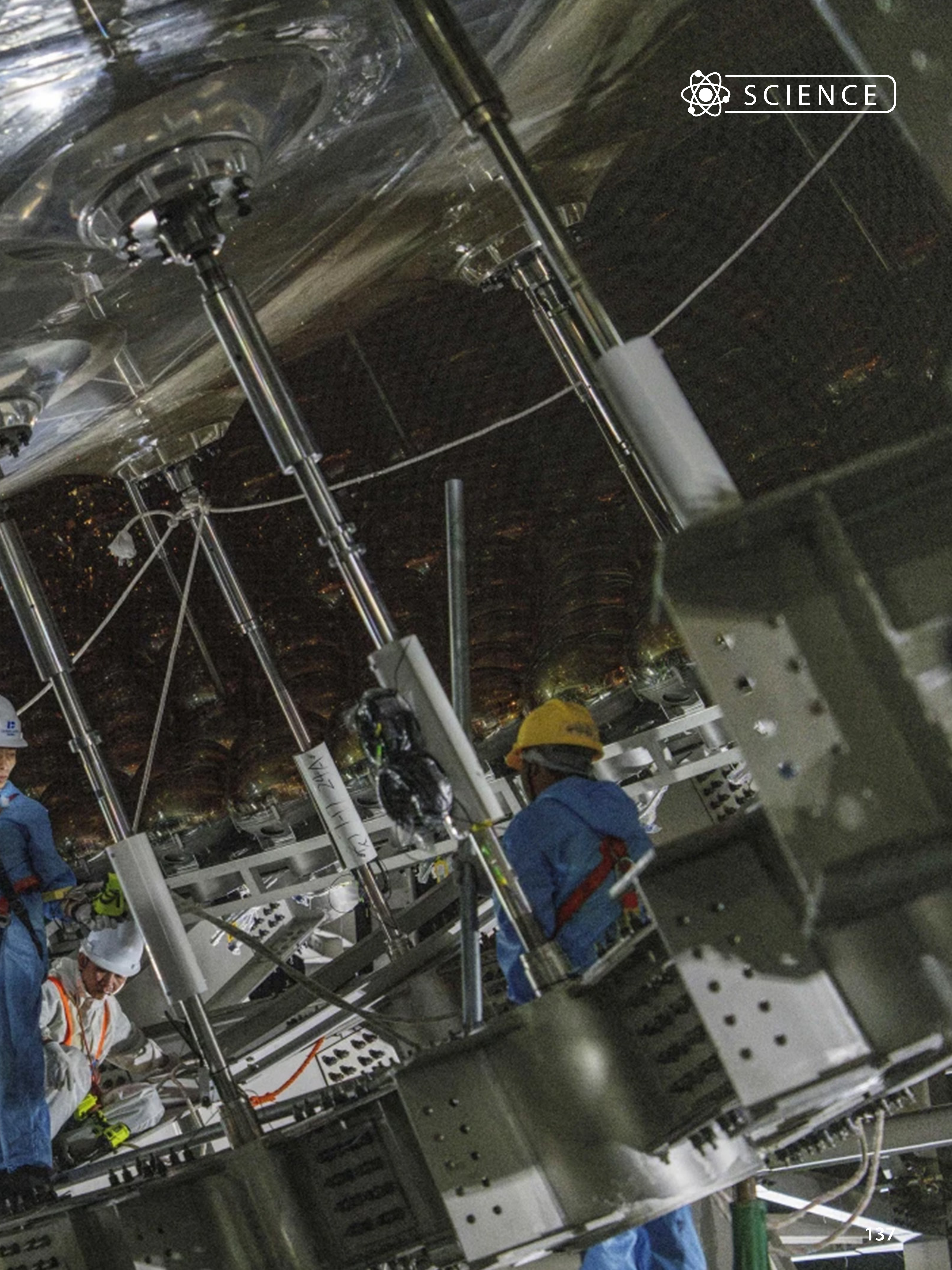
# A NEW NEUTRINO DETECTOR IN CHINA AIMS TO SPOT MYSTERIOUS GHOST PARTICLES LURKING AROUND US



Underneath a granite hill in southern China, a massive detector is nearly complete that will sniff out the mysterious ghost particles lurking around us.

The Jiangmen Underground Neutrino Observatory will soon begin the difficult task of spotting neutrinos: tiny cosmic particles with a mind-bogglingly small mass.

The detector is one of three being built across the globe to study these elusive ghost particles in the finest detail yet. The other two, based in the United States and Japan, are still under construction.



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Spying neutrinos is no small feat in the quest to understand how the universe came to be. The Chinese effort, set to go online next year, will push the technology to new limits, said Andre de Gouvea, a theoretical physicist at Northwestern University who is not involved with the project.

“If they can pull that off,” he said, “it would be amazing.”

## WHAT ARE NEUTRINOS?

Neutrinos date back to the Big Bang, and trillions zoom through our bodies every second. They spew from stars like the sun and stream out when atomic bits collide in a particle accelerator.

Scientists have known about the existence of neutrinos for almost a century, but they’re still in the early stages of figuring out what the particles really are.

“It’s the least understood particle in our world,” said Cao Jun, who helps manage the detector known as JUNO. “That’s why we need to study it.”

There’s no way to spot the tiny neutrinos whizzing around on their own. Instead, scientists measure what happens when they collide with other bits of matter, producing flashes of light or charged particles.

Neutrinos bump into other particles only very rarely, so to up their chances of catching a collision, physicists have to think big.

“The solution for how we measure these neutrinos is to build very, very big detectors,” de Gouvea said.

## A BIG DETECTOR TO MEASURE TINY PARTICLES

The $300 million detector in Kaiping, China, took over nine years to build. Its location 2,297 feet (700 meters) underground protects from pesky cosmic rays and radiation that could throw off its neutrino-sniffing abilities.

On Wednesday, workers began the final step in construction. Eventually, they'll fill the orb-shaped detector with a liquid designed to emit light when neutrinos pass through and submerge the whole thing in purified water.

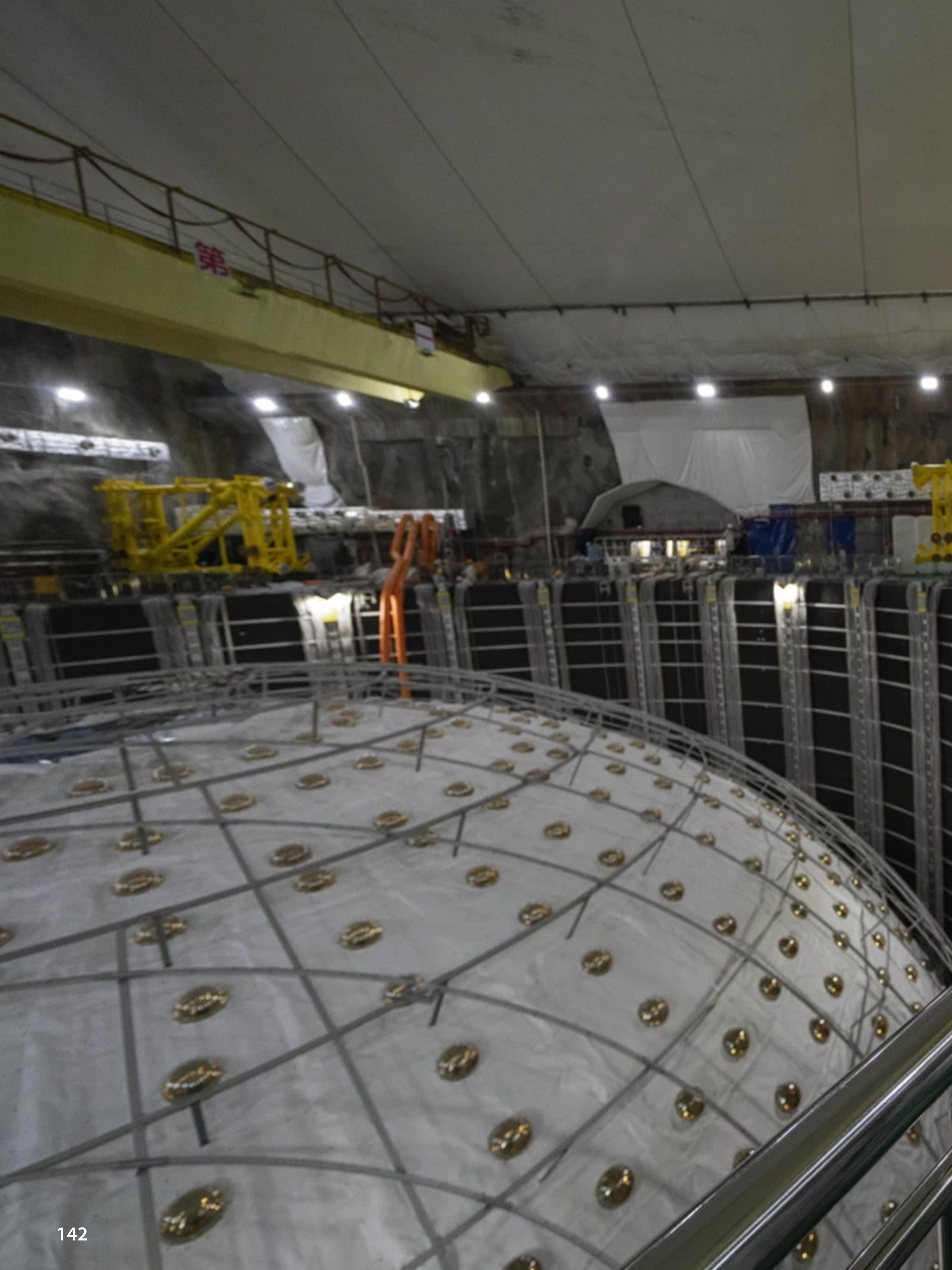
It'll study antineutrinos — an opposite to neutrinos which allow scientists to understand their behavior — produced from collisions inside two nuclear power plants located over 31 miles (50 kilometers) away. When the antineutrinos come into contact with particles inside the detector, they'll produce a flash of light.

The detector is specially designed to answer a key question about a longstanding mystery. Neutrinos switch between three flavors as they zip through space, and scientists want to rank them from lightest to heaviest.

Sensing these subtle shifts in the already evasive particles will be a challenge, said Kate Scholberg, a physicist at Duke University who is not involved with the project.

"It's actually a very daring thing to even go after it," she said.

China's detector is set to operate during the second half of next year. After that, it'll take some time to collect and analyze the data — so scientists will have to keep waiting to fully unearth the secret lives of neutrinos.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Two similar neutrino detectors – Japan's Hyper-Kamiokande and the Deep Underground Neutrino Experiment based in the United States – are under construction. They're set to go online around 2027 and 2031 and will cross-check the China detector's results using different approaches.

"In the end, we have a better understanding of the nature of physics," said Wang Yifang, chief scientist and project manager of the Chinese effort.

## UNDERSTANDING HOW THE UNIVERSE FORMED

Though neutrinos barely interact with other particles, they've been around since the dawn of time. Studying these Big Bang relics can clue scientists into how the universe evolved and expanded billions of years ago.

"They're part of the big picture," Scholberg said.

One question researchers hope neutrinos can help answer is why the universe is overwhelmingly made up of matter with its opposing counterpart — called antimatter — largely snuffed out.

Scientists don't know how things got to be so out of balance, but they think neutrinos could have helped write the earliest rules of matter.

The proof, scientists say, may lie in the particles. They'll have to catch them to find out.

Yellowstone

# TOP 10 TV SHOWS

**SQUIRREL GAMES**
*RuPaul's Drag Race*

**LIFE IS A PROMISE**
*Yellowstone*

**GIVE THE WORLD AWAY**
*Yellowstone*

**DESIRE IS ALL YOU NEED**
*Yellowstone*

**COUNTING COUP**
*Yellowstone*

**THE APOCALYPSE OF CHANGE**
*Yellowstone*

**THREE FIFTY-THREE**
*Yellowstone*

**DO YOU LOVE HIM?**
*Jersey Shore: Family Vacation*

**THE END OF AN ERA, PT. 1**
*The Challenge*

**UNTUCKED - SQUIRREL GAMES**
*RuPaul's Drag Race: Untucked!*

Mel Robbins

# TOP 10 BOOKS

**HOLMES IS MISSING**
*James Patterson & Brian Sitts*

**THE LET THEM THEORY**
*Mel Robbins*

**THE FOREVER RULE**
*Carrie Ann Ryan*

**TELL ME EVERYTHING: OPRAH'S...**
*Elizabeth Strout*

**THE LORD OF THE RINGS ILLUSTRATED**
*J. R. R. Tolkien*

**ONYX STORM**
*Rebecca Yarros*

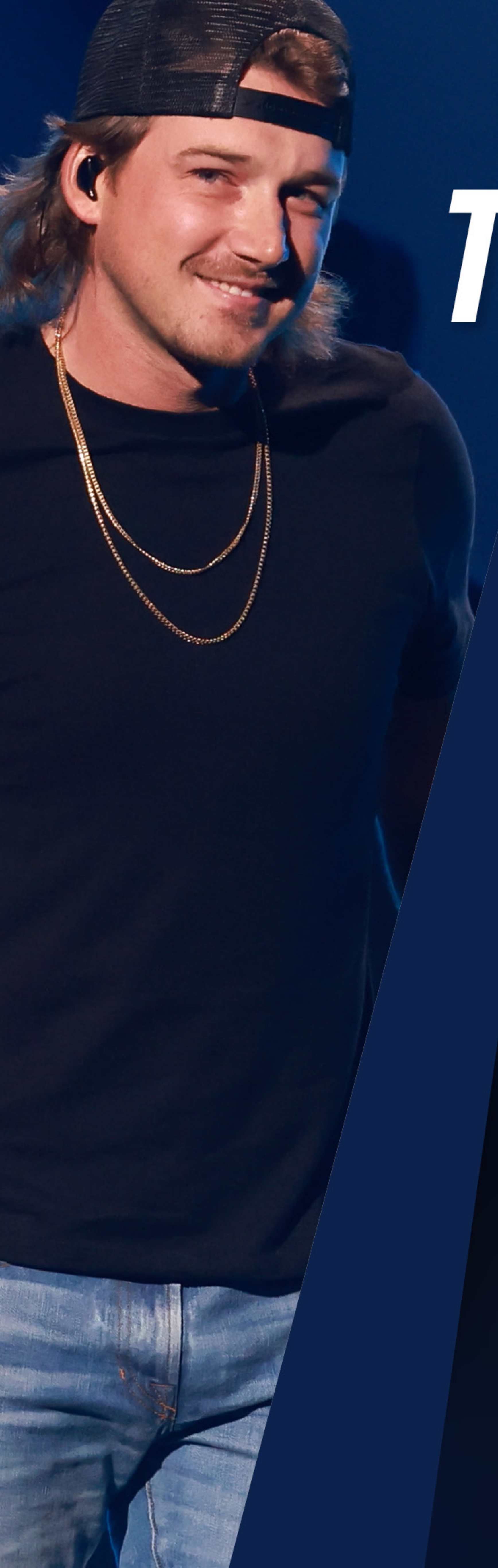
**JAMES**
*Percival Everett*

**THE WOMEN**
*Kristin Hannah*

**THE WEDDING PEOPLE**
*Alison Espach*

**ATOMIC HABITS**
*James Clear*

Morgan Wallen



# TOP 10 SONGS

**SMILE**
Morgan Wallen

**APT.**
ROSÉ & Bruno Mars

**DIE WITH A SMILE**
Lady Gaga & Bruno Mars

**A BAR SONG (TIPSY)**
Shaboozey

**LOSE CONTROL**
Teddy Swims

**MESSY**
Lola Young

**BIRDS OF A FEATHER**
Billie Eilish

**LOVE SOMEBODY**
Morgan Wallen

**THE DOOR**
Teddy Swims

**I AM NOT OKAY**
Jelly Roll

Bad Bunny

# TOP 10 ALBUMS

**DEBÍ TIRAR MÁS FOTOS**
*Bad Bunny*

**WICKED: THE SOUNDTRACK**
*Wicked Movie Cast, Cynthia Erivo & Ariana Grande*

**WHAM**
*Lil Baby*

**GNX**
*Kendrick Lamar*

**BEAUTIFULLY BROKEN (PICKIN' UP...)**
*Jelly Roll*

**THE ESSENTIAL BOB DYLAN (REVISED...)**
*Bob Dylan*

**EPIC: THE ITHACA SAGA (OFFICIAL...)**
*Jorge Rivera-Herrans*

**I'VE TRIED EVERYTHING BUT THERAPY...**
*Teddy Swims*

**GREATEST**
*Jim Croce*

**ROSIE**
*ROSÉ*

Mac Miller

# TOP 10 MUSIC VIDEOS

***BALLOONERISM TRAILER***
*Mac Miller*

***APT.***
*ROSÉ & Bruno Mars*

***DIE WITH A SMILE***
*Lady Gaga & Bruno Mars*

***EVEN THOUGH I WALK***
*Bethel Music & Hannah McClure*

***HOLY SONG***
*Bethel Music & Brooke Ligertwood*

***HE HAS DONE GREAT THINGS***
*Bethel Music & Brian Johnson*

***MADE FOR MORE***
*Bethel Music, Josh Baldwin & Jenn Johnson*

***CENTER***
*Bethel Music & Abbie Gamboa*

***IF THE LORD***
*Bethel Music & Zahriya Zachary*

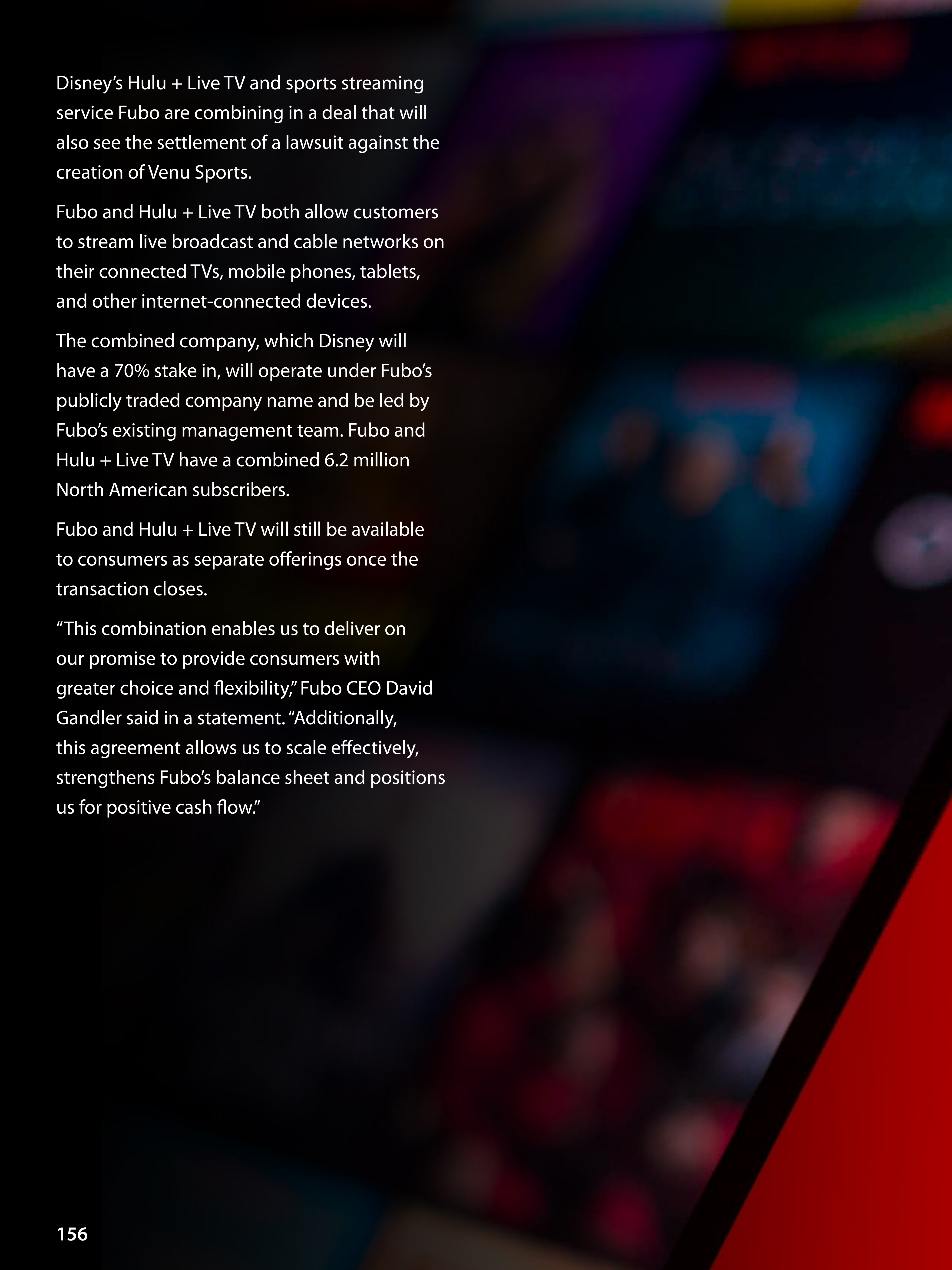
***SMILE***
*Morgan Wallen*

hulu
NETFLIX
YouTube
MUBI
Disney+

fubo
LIVE TV & SPORTS
Fubo
YouTubeTV

# FUBO COMBINING WITH DISNEY'S HULU + LIVE TV; LAWSUIT AGAINST VENU SPORTS SETTLED

Image: Gabby Jones



Disney's Hulu + Live TV and sports streaming service Fubo are combining in a deal that will also see the settlement of a lawsuit against the creation of Venu Sports.

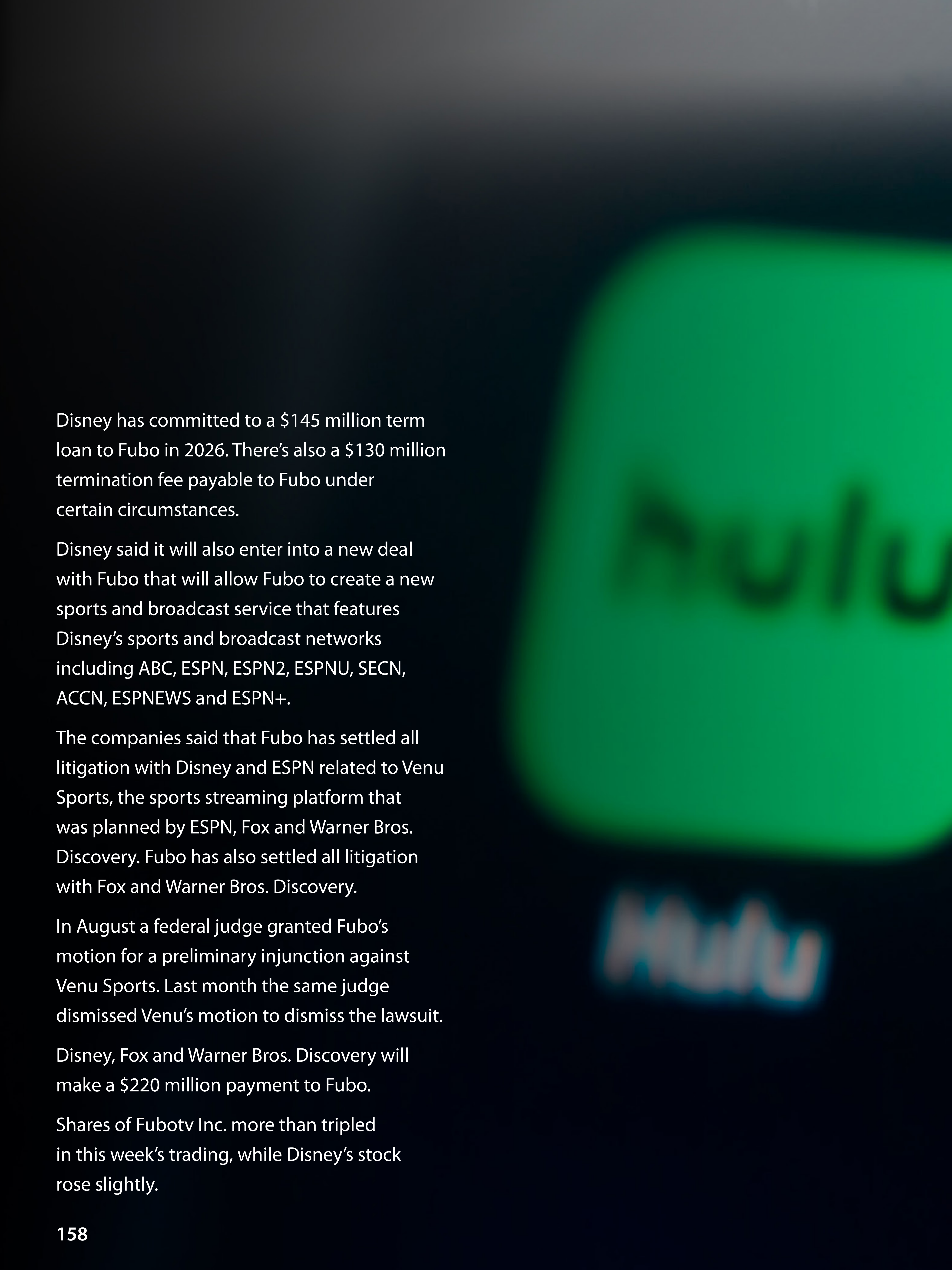
Fubo and Hulu + Live TV both allow customers to stream live broadcast and cable networks on their connected TVs, mobile phones, tablets, and other internet-connected devices.

The combined company, which Disney will have a 70% stake in, will operate under Fubo's publicly traded company name and be led by Fubo's existing management team. Fubo and Hulu + Live TV have a combined 6.2 million North American subscribers.

Fubo and Hulu + Live TV will still be available to consumers as separate offerings once the transaction closes.

"This combination enables us to deliver on our promise to provide consumers with greater choice and flexibility," Fubo CEO David Gandler said in a statement. "Additionally, this agreement allows us to scale effectively, strengthens Fubo's balance sheet and positions us for positive cash flow."

fubo TV



Disney has committed to a $145 million term loan to Fubo in 2026. There's also a $130 million termination fee payable to Fubo under certain circumstances.

Disney said it will also enter into a new deal with Fubo that will allow Fubo to create a new sports and broadcast service that features Disney's sports and broadcast networks including ABC, ESPN, ESPN2, ESPNU, SECN, ACCN, ESPNEWS and ESPN+.

The companies said that Fubo has settled all litigation with Disney and ESPN related to Venu Sports, the sports streaming platform that was planned by ESPN, Fox and Warner Bros. Discovery. Fubo has also settled all litigation with Fox and Warner Bros. Discovery.

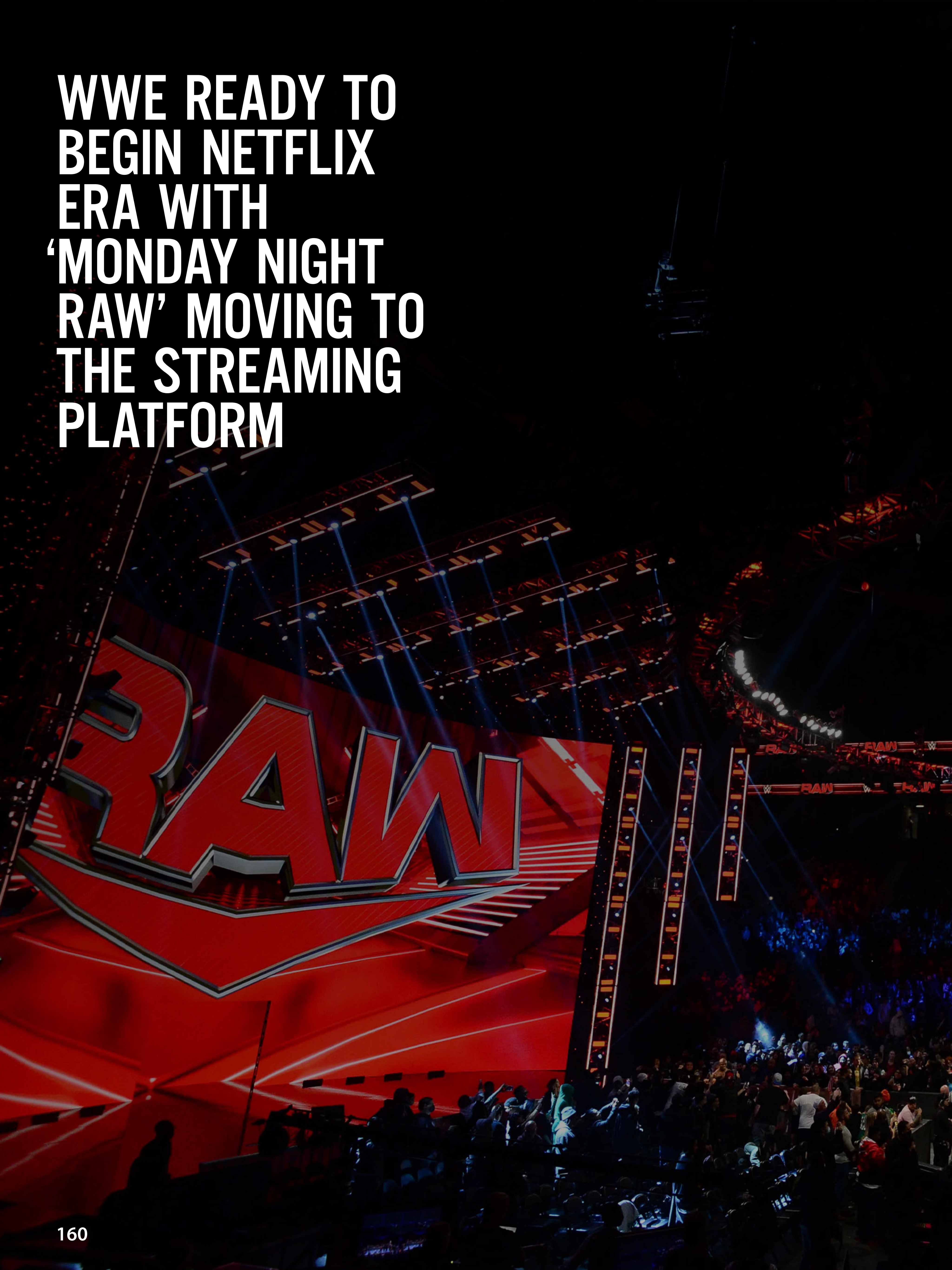
In August a federal judge granted Fubo's motion for a preliminary injunction against Venu Sports. Last month the same judge dismissed Venu's motion to dismiss the lawsuit.

Disney, Fox and Warner Bros. Discovery will make a $220 million payment to Fubo.

Shares of Fubotv Inc. more than tripled in this week's trading, while Disney's stock rose slightly.

Disney+
Disney+

# WWE READY TO BEGIN NETFLIX ERA WITH ‘MONDAY NIGHT RAW’ MOVING TO THE STREAMING PLATFORM



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RAW
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RAW

Nick Khan's prediction becomes a reality on Monday night.

The World Wrestling Entertainment executive said during earning calls in the past that he saw a day when Netflix would continue to evolve and enter into live programming, much to the consternation of Netflix officials.

However, Khan saw the hires that Netflix was making along with the streaming service's offerings that could appeal to all family members.

Now, one of those offerings is the WWE.

The 1,650th episode of "Monday Night Raw" from the Intuit Dome outside of Los Angeles officially kicks off WWE's 10-year partnership with Netflix. The agreement, reached last January, is worth in excess of $5 billion with an option for Netflix to extend for an additional 10 years or opt out after five.

"We try to appeal the WWE to all 50 states and to countries globally. We think Netflix does the same thing," said Khan, who is WWE's president.

Netflix — which has 282.3 million subscribers in more than 190 countries — becomes the exclusive home of "Raw" in the U.S., Canada, the United Kingdom and Latin America, with additional countries to be added over time. The bigger component for Netflix though, is that the streaming platform will carry all of the company's shows overseas — including "Smackdown" and "NXT" — as well as premium live events like WrestleMania, SummerSlam and Royal Rumble.

In the U.S., "Smackdown" moved to USA Network from Fox and "NXT" from USA to the

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CW three months ago. Peacock has a contract to carry WWE's premium live events through March 2026.

"Raw" began airing on Jan. 11, 1993, and is the longest running weekly episodic series on television. Most of that time had been on USA Network with a run on Spike TV, now known as Paramount Network.

"It has great storytelling, characters along with memorable and surprising stories. And the idea of combining this kind of intense fandom with these characters and our reach globally just seemed like such a great opportunity," said Bela Bajaria, Netflix's chief content officer. "What we also love is the multigenerational fan base. At the end of the day, we have great things that our members love and this totally delivers on all of the things that we want. And to do it 52 weeks a year is super exciting."

WWE's global reach has expanded during the past year, with nearly half of its premium live events taking place overseas. The company will also embark on an extended tour of Europe in March to build momentum for WrestleMania 41, which takes place in Las Vegas April 19 and 20.

Khan said WWE first approached Netflix about its rights in 2018, but Netflix wasn't ready to begin carrying live events. The streaming service has ramped up its efforts during the past year, not only with sports events, but with Chris Rock's comedy special and the roast of Tom Brady.

Brandon Riegg, Netflix's vice president of nonfiction series and sports, said the social media buzz around "Raw" each week as well as the stable audience WWE provides made it a natural fit this time when the company approached Netflix last year.

In turn, Riegg thinks Netflix can help expand WWE's audience the way it did with Formula 1 and the "Drive to Survive" series.

"It really was just fitting in to the whole picture of we're going to do these big events like the Tyson-Paul fight and the NFL on Christmas," he said. "But then throughout the year, if we can have a steady drumbeat of those amazing live moments and live action and spectacle, that's what we're going to get with WWE."

According to Nielsen, "Raw's" final episode on USA Network averaged 1.6 million viewers despite going against the "Monday Night Football" matchup between the Detroit Lions and San Francisco 49ers.

Khan and WWE chief content officer Paul "Triple H" Levesque have also stressed that the three-hour weekly show will not hurt its rating due to being on a streaming platform. "Raw" was known for toeing the line on risky content during the late 1990s in what WWE called the "Attitude Era," but that has changed over the years.

"It's not pushing anybody away of what they want. It's a safe place for families and everybody to be able to view. That will not change, but you don't have to change that to expand and improve what you do," Levesque said.

WWE's storytelling and character development continues to excel even during external challenges. Former chairman Vince McMahon resigned last January after a lawsuit claiming sexual misconduct. In 2023, WWE was bought

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by Endeavor and merged with Ultimate Fighting Championship to create TKO Group Holdings.

According to WWE, there were 44 sellouts for TV shows and 66 overall, including house shows and premium live events, in 2024.

WWE champion Cody Rhodes credited Khan and Levesque for keeping the company on track, along with scaling back on some of the non-televised live events to make sure top talent does not get burned out during the year.

Levesque said Monday's show will be on the level of a premium live event. John Cena, who is retiring from WWE at the end of the year, begins his farewell tour with three main event matches on tap. It also wouldn't be a shock if Dwayne "The Rock" Johnson makes an appearance.

Roman Reigns, who will take part in one of the main event matches, said he is always trying to put his best foot forward, but he also knows how big Monday night is for the company.

"There's no hiding that this is Netflix and this is huge and this is going to be on a global platform with a lot of people watching. I'm not sure exactly what that audience is going to look like. It's going to be crazy, I know that."

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# TIKTOK CREATORS LEFT IN LIMBO WHILE AWAITING DECISION ON POTENTIAL PLATFORM BAN

Image: Richard Vogel

Will TikTok be banned this month?

That's the pressing question keeping creators and small business owners in anxious limbo as they await a decision that could upend their livelihoods. The fate of the popular app will be decided by the Supreme Court, which will hear arguments on Jan. 10 over a law requiring TikTok to break ties with its Chinese-based parent company, ByteDance, or face a U.S. ban.

At the heart of the case is whether the law violates the First Amendment with TikTok and its creator allies arguing that it does. The U.S. government, which sees the platform as a national security risk, says it does not.

For creators, the TikTok doomsday scenarios are nothing new since President-elect Donald Trump first tried to ban the platform through executive order during his first term. But despite Trump's recent statements indicating he now wants TikTok to stick around, the prospect of a ban has never been as immediate as it is now with the Supreme Court serving as the final arbiter.

If the government prevails as it did in a lower court, TikTok says it would shut down its U.S. platform by Jan. 19, leaving creators scrambling to redefine their futures.

Image: Brendan Smialowski

Image: Ted Shaffrey

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"A lot of my other creative friends, we're all like freaking out. But I'm staying calm," said Gillian Johnson, who benefited financially from TikTok's live feature and rewards program, which helped creators generate higher revenue potential by posting high-quality original content. The 22-year-old filmmaker and recent college graduate uses her TikTok earnings to help fund her equipment for projects such as camera lens and editing software for her short films "Gambit" and "Awaken! My Neighbor."

Johnson said the idea of TikTok going away is "hard to accept."

Many creators have taken to TikTok to voice their frustrations, grappling with the possibility that the platform they've invested so much in could soon disappear. Online communities risk being disrupted, and the economic fallout could especially be devastating for those who mainly depend on TikTok and have left full-time jobs to build careers and incomes around their content.

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Image: J. Scott Applewhite

TikTok helped me grow my business
#Keep TikTok

For some, the uncertainty has led them to question whether to continue creating content at all, according to Johnson, who says she knows creators who have been thinking about quitting. But Nicla Bartoli, the vice president of sales at The Influencer Marketing Factory, said the creators she has interreacted with have not been too worried since news about a potential TikTok ban has come up repeatedly over the years, and then died down.

"I believe a good chunk think it is not going to happen," said Bartoli, whose agency works to pair influencers and brands.

It's unclear how quickly the Supreme Court will issue a decision. But the court could act swiftly to block the law from going into effect if at least five of the nine justices deem it unconstitutional.

Trump, for his part, has already asked the justices to put a pause on the ban so he could weigh in after he takes office. In a brief — written by his pick for solicitor general — Trump called the First Amendment implications of a TikTok ban "sweeping and troubling" and said he wants a "negotiated resolution" to the issue, something the Biden administration had pursued to no avail.

While waiting for the dust to settle in Washington, some creators are exploring alternatives ways to promote themselves or their business, encouraging users to follow them on other social media platforms or are investing more time producing non-TikTok content.

Johnson says she is already strategizing her next move and exploring alternative opportunities. While she hasn't found a place quite like TikTok, she's begun to spend more of her time on other platforms, such as Instagram and YouTube, both of whom are expected to benefit financially if TikTok vanishes.

According to a report by Goldman Sachs, the so-called creator economy, which has been fueled in part by TikTok, could be worth $480 billion by 2027.

Because the opportunity to monetize content exists across a range of platforms, a vast amount of creators have already diversified their social media presence. However, many TikTok creators have credited the platform — and its algorithm — with giving them a type of exposure they did not receive on other platforms. Some say it has also boosted and provided opportunities for creators of color and those from other marginalized groups.

Despite fears about the fate of TikTok, industry analysts note creators are generally avoiding making any big changes, like abandoning platform, until something actually happens.

"I'm anxious but also trying to be hopeful in a weird way," said Brandon Hurst, who credits TikTok with rescuing his business from obscurity and propelling it into rapid growth.

A year after joining TikTok, the 30-year-old Hurst, who sells plants, said his sales doubled, outpacing the traction he'd struggled to gain on Instagram. He built his clientele through the live feature on TikTok, which has helped him sell more than 77,000 plants. The business has thrived so much that he says he now employs five people, including his husband and mom.

"For me, this has been my sole way of doing business," Hurst said.

Image: Evelyn Hockstein

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Image: Evelyn Hockstein

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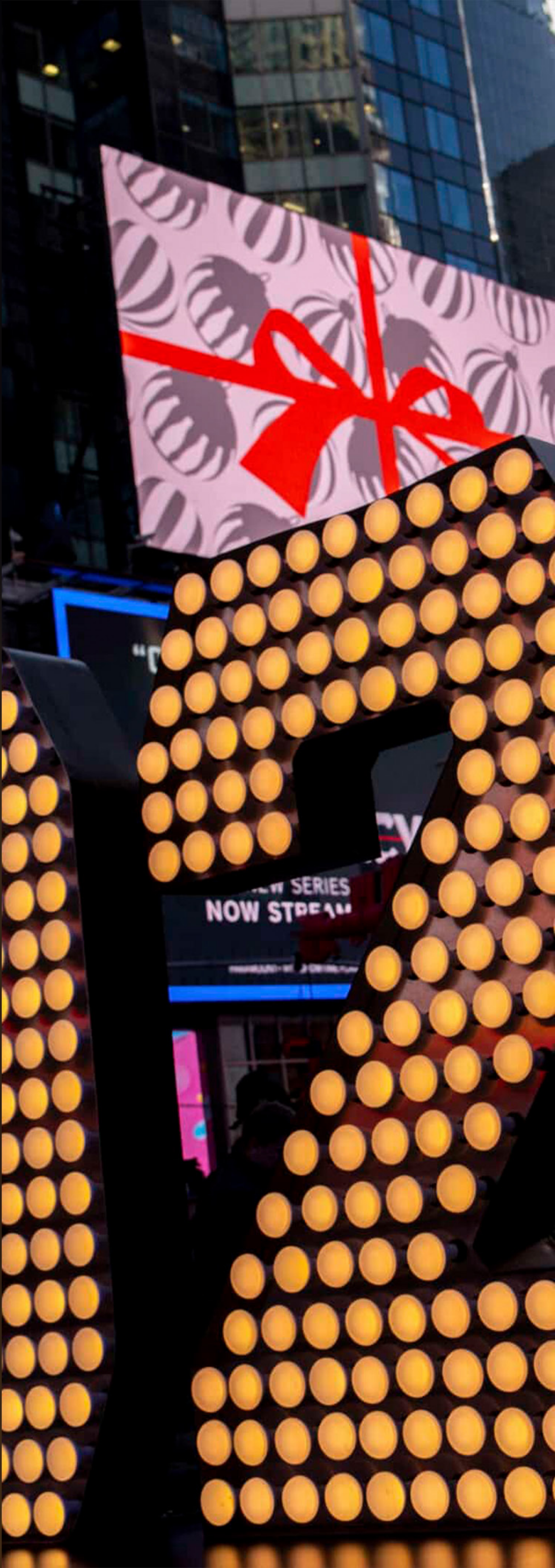
Billion Dollar Boy, a New York-based influencer marketing agency, has advised creators to download all of their TikTok content into a personal portfolio, which is especially important for those who post primarily on the platform, said Edward East, the agency's founder and group CEO. This can help them quickly build their audiences elsewhere. Plus it can serve as a resume for brands who might want to partner with them for product advertisements, East said.

But until the deadline of Jan. 19 comes around, East said creators should continue to post regularly on TikTok, which has 170 million monthly U.S. users and remains highly effective in reaching audiences.

If the Supreme Court does not delay the ban, as Trump is asking them to do, app stores and internet service providers would be required to stop providing service to TikTok by Jan. 19. That means anyone who doesn't have TikTok on their phone would be unable to download it. TikTok users would continue to have access, but the prohibitions — which will prevent them from updating the app — will eventually make the app "unworkable," the Justice Department has said.

TikTok said in court documents that it estimates a one-month shutdown would cause the platform to lose approximately a third of its daily users in the U.S. The company argues a shutdown, even if temporary, will cause it irreparable harm, a legal bar used by judges to determine whether to put the brakes on a law facing a challenge. In under three weeks, Americans will know if the Supreme Court agrees.

# 10 TIPS FROM EXPERTS TO HELP YOU CHANGE YOUR RELATIONSHIP WITH MONEY IN 2025



Now that 2025 is here, you might be reflecting on your financial goals for the year.

Whether you're saving to move out of your parents' house or pay off student loan debt, financial resolutions can help you stay motivated, said Courtney Alev, consumer advocate for Credit Karma.

"Entering a new year doesn't erase all our financial challenges from the prior year," Alev said. "But it can really help to bring a fresh-start mentality to how you're managing your finances."

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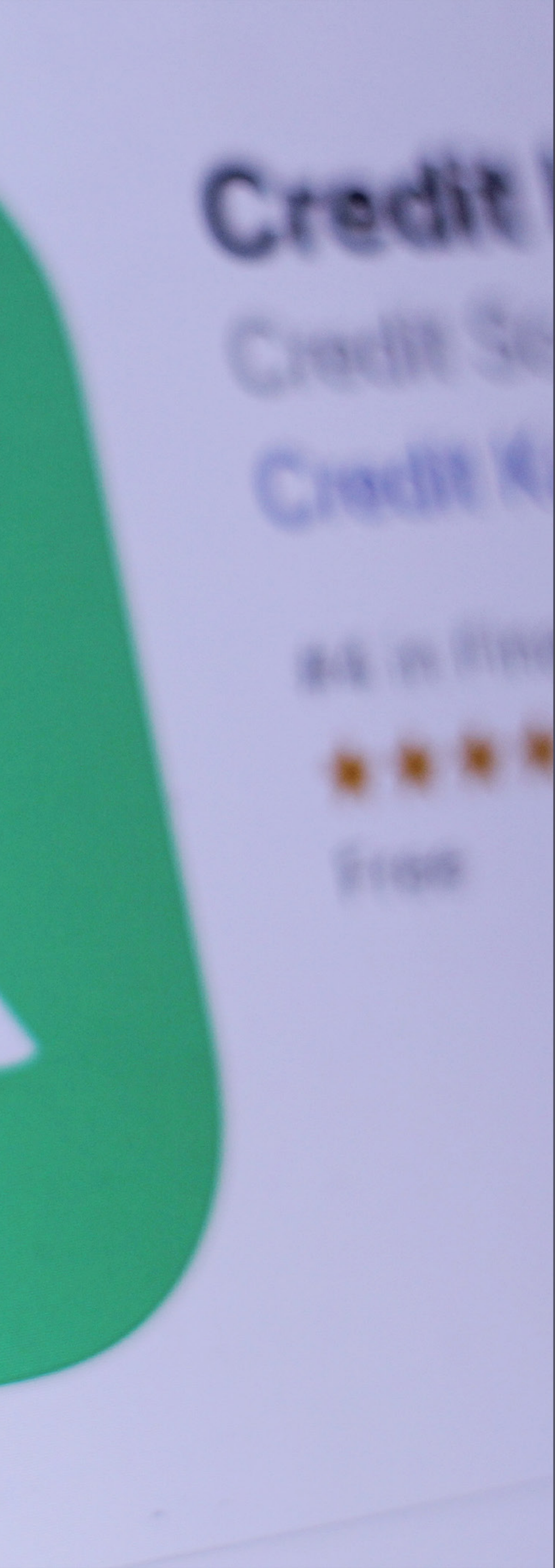

If you're planning to make financial resolutions for the new year, experts recommend that you start by evaluating the state of your finances in 2024. Then, set specific goals and make sure they're attainable for your lifestyle.

Here are some tips from experts:

## CHANGE YOUR RELATIONSHIP WITH MONEY

Think about how you currently deal with finances — what's good, what's bad, and what can improve.

"Let this be the year you change your relationship with money," said Ashley Lapato, personal finance educator for YNAB, a budgeting app.

If you feel like money is a chore, that there's shame surrounding the topic of money, or like you were born being "bad at money," it's time to change that mentality, Lapato said.

To adjust your approach, Lapato recommends viewing money goals as an opportunity to imagine your desired lifestyle in the future. She recommends asking questions like, "What do my 30s look like? What do my 40s look like?" and using money as a means to get there.

Liz Young Thomas, head of SoFi Investment Strategy, added that it's key you forgive yourself for past mistakes in order to move into the new year with motivation.

## KNOW YOUR "WHY"

When setting your financial resolutions for 2025, it's important to establish the "why" of each,

said Matt Watson, CEO of Origin, a financial tracking app.

"If you can attach the financial goal to a bigger life goal, it's much more motivating and more likely you'll continue on that path," Watson said.

Whether you're saving to buy a house, pay off credit card debt or take a summer vacation, being clear about the goal can keep you motivated. Watson also recommends using a tool to help you keep track of your finances, such as an app, spreadsheet, or website.

## BUDGET, BUDGET, BUDGET

"After three years of inflation, your pay increases are likely still playing catch up to your monthly expenses, leaving you wondering where all the money is going," said Greg McBride, chief financial analyst at Bankrate. "Make that monthly budget for 2025 and resolve to track your spending against it throughout the year."

McBride said that you may need to make adjustments during the year as certain expenses increase, which would require cutting back in other areas.

"Calibrate your spending with your income, and any month you spend less than budgeted, transfer the difference into your savings account, ideally a high-yield savings account," he said.

## PAY DOWN OUTSTANDING DEBT

"Interest rates aren't likely to come down very fast, so you're still going to have to put in the hard work of paying down debt, especially high-cost credit card debt, and do so with urgency," McBride said.

Start by taking stock of how much debt you have now relative to the beginning of the year. Hopefully you've made steady progress on paying it down, but, if you've gone in the other direction, McBride encourages making a game plan. That includes looking into 0% balance transfer offers.

## TAKE CONTROL OF YOUR CREDIT CARD INTEREST RATE

"You have more power over credit card interest rates than you think you do," said Matt Schulz, chief credit analyst at LendingTree. "Wielding that power is one of the best moves you can make in 2025."

A 0% balance transfer credit card is "a good weapon" in the fight against high card APRs, or annual percentage rates, he said. A low-interest personal loan is an option as well.

You may simply be able to pick up the phone and ask for a lower interest rate. LendingTree found that a majority of people who did that in 2024 were successful, and the average reduction was more than 6 points.

## SET REALISTIC, PRACTICAL GOALS

When planning for your financial resolutions, it's important to consider how you're going to make your goals sustainable for your lifestyle, said Credit Karma's Alev.

"It really is a marathon, not a sprint," Alev said.

Alev recommends setting realistic, practical goals to make it easier to stick with them. For example, instead of planning to save thousands

of dollars by the end of the year, start by saving $20 a paycheck.

Even when your plans are achievable, there are times you'll get derailed. Maybe it's an unexpected medical bill or an extraordinary life event. When these situations happen, Alev recommends trying not to feel defeated and working to get back on track without feeling guilty.

## DON'T BURY YOUR HEAD IN THE SAND

"You can't manage what you can't see, so set a New Year's resolution to check your credit score monthly in 2025," said Rikard Bandebo, chief economist at VantageScore. "Be sure to pay more than the minimum on your credit accounts, as that's one of the best ways to boost your credit score."

Bandebo also advises student loan borrowers to make all payments on time, as servicers will begin to report late payments starting in January, and missed payments will affect borrowers' credit scores.

## AUTOMATE SAVINGS, WHERE POSSIBLE

Automated changes, like increasing workplace 401(k) plan contributions, setting up direct deposits from paychecks into dedicated savings accounts, and arranging for monthly transfers into an IRA and/or 529 college savings accounts all add up quickly, McBride said.

## SLOW DOWN

Your financial goals can encompass more than just managing your money better — they can also be about keeping your money safe from scams. A golden rule to protect yourself from scams is to "slow down," said Johan Gerber, executive vice president of security solutions at Mastercard.

"You have to slow down and talk to other people if you're not sure (whether or not) it's scam," said Gerber, who recommends building an accountability system with family to keep yourself and your loved ones secure.

Scammers use urgency to make people fall for their tricks, so taking your time to make any financial decision can keep you from losing money.

## FOCUS ON FINANCIAL WELLNESS

Your financial goals don't always have to be rooted in a dollar amount — they can also be about well-being. Finances are deeply connected with our mental health, and, to take care of our money, we also need to take care of ourselves.

"I think that now more than any other year, your financial wellness should be a resolution," said Alejandra Rojas, personal finance expert and founder of The Money Mindset Hub, a mentoring platform for women entrepreneurs. "Your mental health with money should be a resolution."

To focus on your financial wellness, you can set one or two goals focusing on your relationship with money. For example, you could find ways to address and resolve financial trauma, or you could set a goal to talk more openly with loved ones about money, Rojas said.

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SPECIAL EDITION" Spirits were high at Apple's "There's more in the making" event, which was held at the Howard Gilman Opera House in Brooklyn, New York on October 30. Hot off the heels of the launch of the new iPhone XS, XS Max and XR, Tim Cook and Co were ready to show off next-generation models of two of the company's most beloved products: the Mac, and the iPad. Introducing a whole host of new editions, this was an Apple event to
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